PROPERTY OF
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3
DENVER, COLORADO,

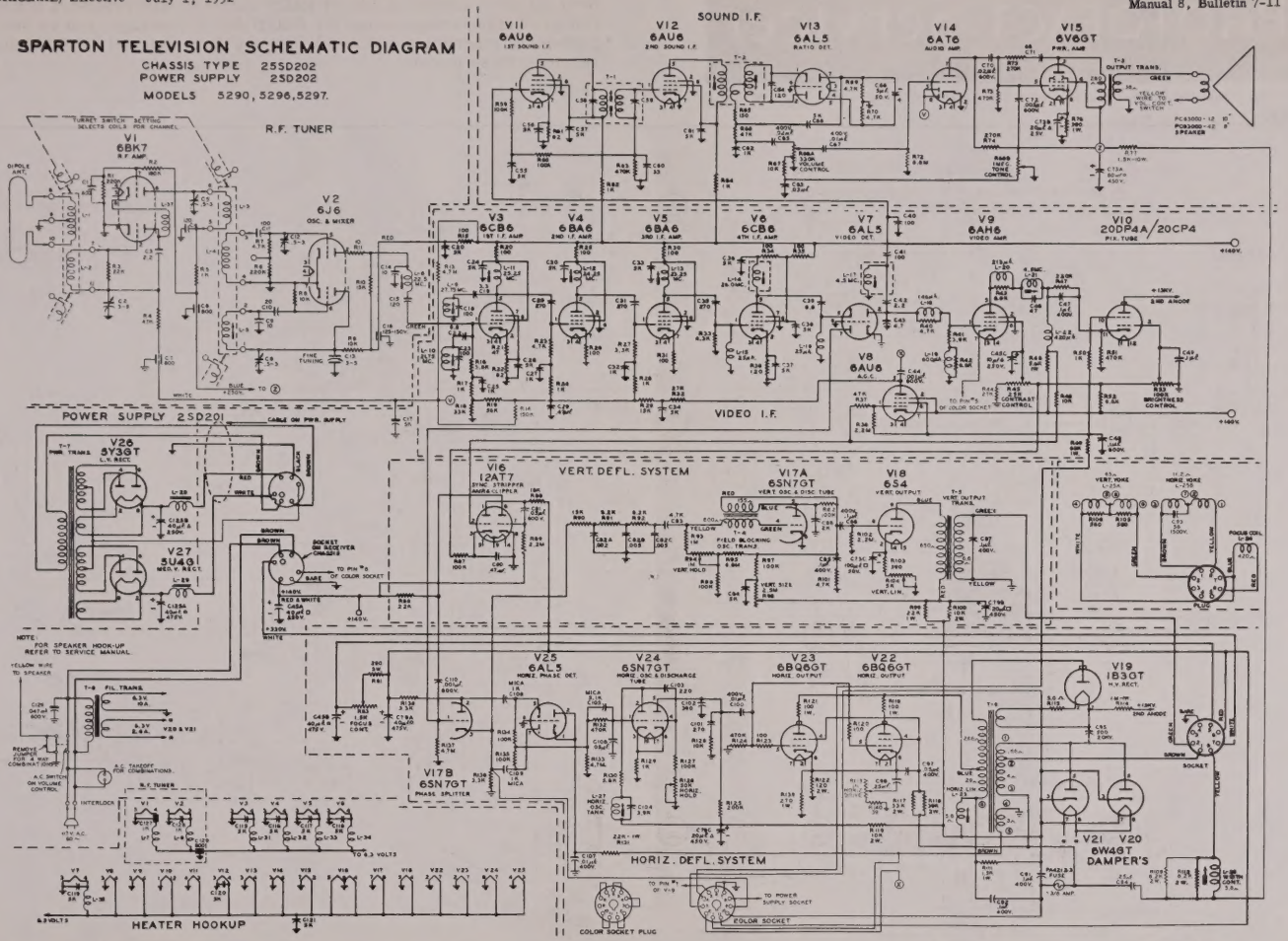
CONTENTS

TRADE NAME	MODEL	SET AND FOLDER No.
Columbia Records	412	336-1
Coronado	TV2-9324A, B, TV2-9325A, TV2-9326A, B, TV2-9327A, TV2-9334A, B, TV2-9335A, TV2-9336A, B, TV2-9337A, TV2-9350A, B, TV2-9351A, TV2-9352A, B, TV2-9353A Tel. Rec.	336-2
Crosley	J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)	336-3
David Bogen	R660	336-4
Firestone	4-C-29 (Code 120-6-TT600)	336-5
Harman-Kardon	C300	336-6
Hyde Park	24T70M (Ch. C2001) Tel. Rec.	336-7
Magnavox	Chassis CR-722	336-8
Masco	FM-6, PM-6	336-9
Mercury	6BM	336-10
Motorola	556, 596, 596-12	336-11
Olympic	1CJ20U, 1CK21U, 1DK17U, 1KJ40U, 1TJ10U, 1TK11U, 4CN15U (Ch. CJ, CK, CN) Tel. Rec.	336-12
Packard	7267427 (480487)	336-13
RCA Victor	8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B) Tel. Rec.	336-14
Webcor	1658	336-15

RCA 24 D- 7295- 7296- 7297- Ch. KC S103R, T.)
24 D- 7215-7317- Ch. KC S103R, T.)

Crosley AC-11B. 11M. Ch. 488 (Crosley)
GH-11B
AT-11B
AT-11M.

PROPERTY OF L.F. SPARKS-WITHINGTON CO.



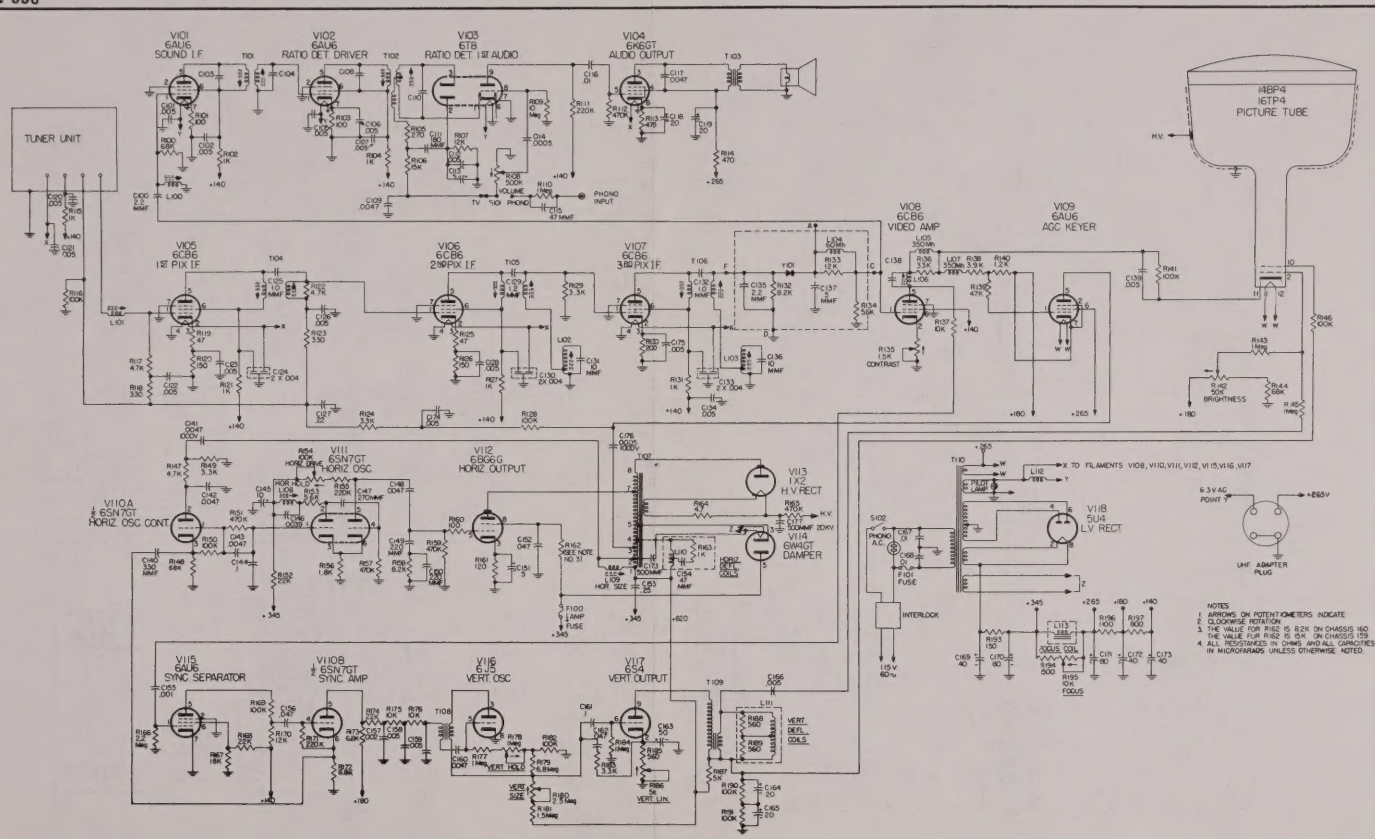
Sparton Models 5290, 5296, 5297 (Ch. 25SD202 & Power Ch. 2SD202)

Schematic Diagram Courtesy of Sparks-Withington Co.

The PHOTOFACT Servicer

Vol. 34 ★ Published for all users of Howard W. Sams' Photofact Folders ★ Nov. 1, 1956
Nos. 335 & 336

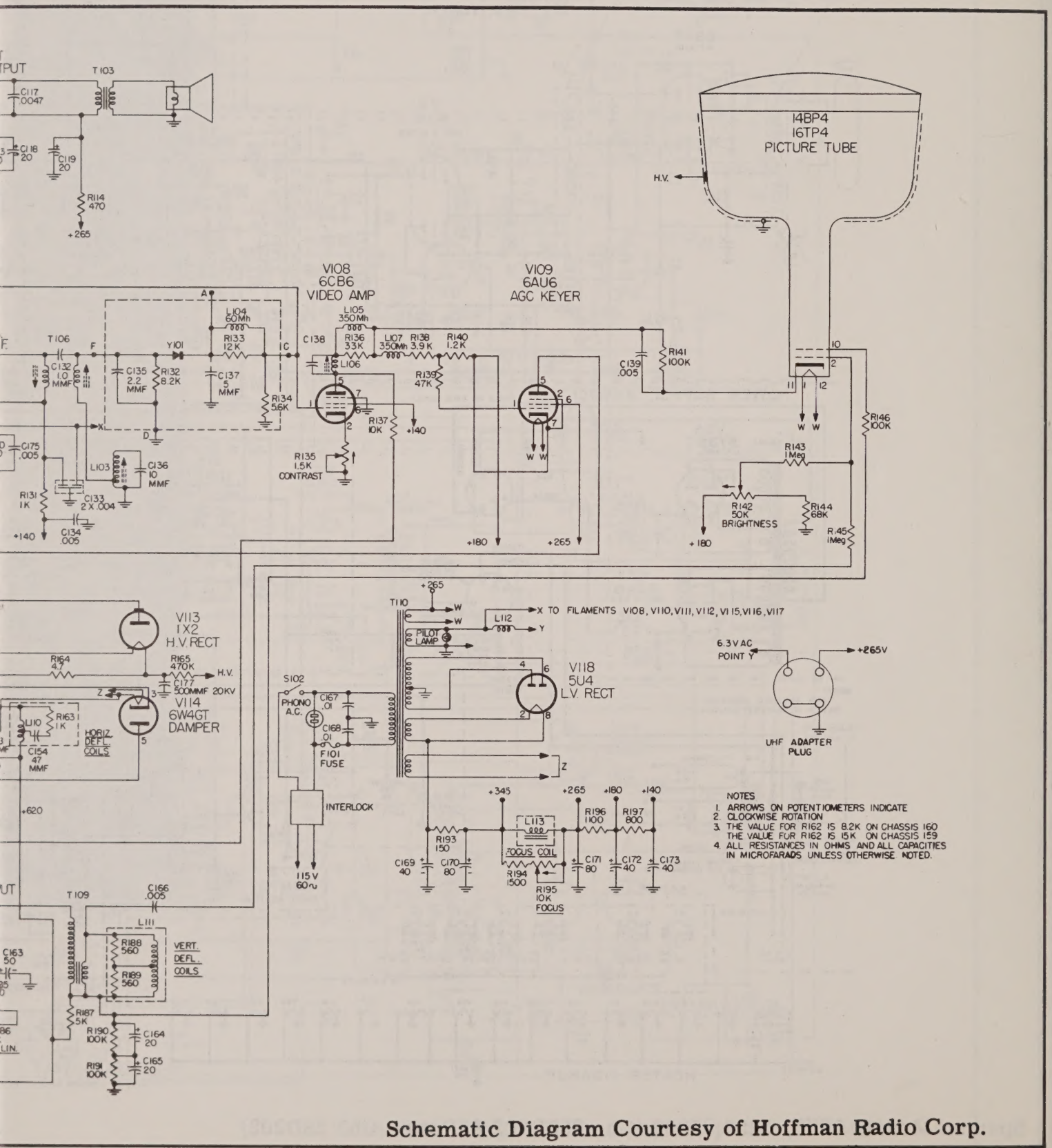
The service information in this Servicer provides data on models which we have been unable to present in PHOTOFACT Folders. The receivers are not in current production; a requirement for PHOTOFACT coverage, and we are therefore presenting schematics and supplementary data that will be of assistance when servicing these models.


V101 6AU6 SOUND I.F.
V102 6AU6 RATIO DET. DRIVER
V103 6T8 RATIO DET. 1ST AUDIO
V104 6K6GT AUDIO OUTPUT
TUNER UNIT
V105 6CB6 1ST PIX I.F.
V106 6CB6 2ND PIX I.F.
V107 6CB6 3RD PIX I.F.
V108 6CB6 VIDEO AMP
V109 6AU6 AGC KEYER
21BP4 16TP4 PICTURE TUBE
V110A ½ 6SN7GT HORIZ. OSC. CONT.
V111 6SN7GT HORIZ. OSC.
V112 6BG6G HORIZ. OUTPUT
V113 1X2 H.V. RECT.
V114 6W4GT DAMPER
V115 6AL5 SYNC. SEPARATOR
V110B ½ 6SN7GT SYNC. AMP.
V116 6J6 VERT. OSC.
V117 6S4 VERT. OUTPUT
V118 5U4 L.V. RECT.
PHONO INPUT
VOLUME
CONTRAST
BRIGHTNESS
HORIZ. HOLD
HORIZ. SIZE
HORIZ. DEFL. COILS
VERT. HOLD
VERT. SIZE
VERT. LIN.
VERT. DEFL. COILS
FOCUS COIL
FOCUS
INTERLOCK
UHF ADAPTER PLUG
NOTES
1. ARROWS ON POTENTIOMETERS INDICATE CLOCKWISE ROTATION.
2. THE VALUE FOR R162 IS 8.2K ON CHASSIS 160 THE VALUE FOR R162 IS 15K ON CHASSIS 159
3. ALL RESISTANCES IN OHMS, AND ALL CAPACITIES IN MICROFARADS UNLESS OTHERWISE NOTED.

Hoffman Models 630, 631 (Ch. 159), 632, 633 (Ch. 160)

Schematic Diagram Courtesy of Hoffman Radio Corp.

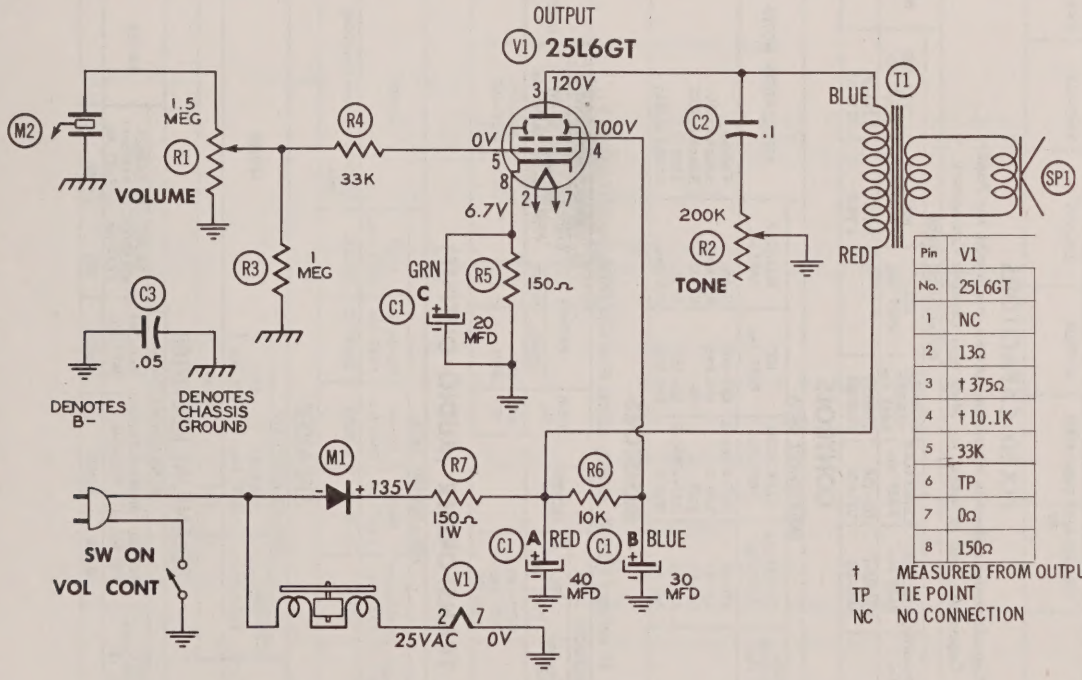
The service information in this Servicer provides data on models which we have been unable to present in PHOTOFACT Folders. The receivers are not in current production; a requirement for PHOTOFACT coverage, and we are therefore presenting schematics and supplementary data that will be of assistance when servicing these models.



Schematic Diagram Courtesy of Hoffman Radio Corp.

COLUMBIA RECORDS
MODEL 412

TRADE NAME	Columbia Records Model 412
MANUFACTURER	Columbia Records, 799 Seventh Ave., New York 19, N.Y.
TYPE SET	AC Operated Phono Amplifier With 3Speed Manual Record Player
TUBES (One)	Type 25L6GT Output
POWER SUPPLY	105-125 Volts AC-60 Cycles RATING .34 Amp. @ 117 Volts AC



Pin No.	V1 25L6GT
1	NC
2	13Ω
3	†375Ω
4	†10.1K
5	33K
6	TP
7	0Ω
8	150Ω

† MEASURED FROM OUTPUT OF M1.
TP TIE POINT
NC NO CONNECTION

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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336-1

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PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	Output	25L6GT	

ITEM No.	USE	TYPE	NOTES

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA Columbia Records PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	40	150		PRS150V4030	BBRT43215	TCT3116	TDLT-3	FMT-312	TVA-3448
B	30	150		20					
C	20	150							

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA Columbia Records PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2	.1	200		P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C3	.05	400		BPD-05	DF-503	CUB4S5		PT415	4TM-S5	

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Columbia Records PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1.5Meg	½		AB-76	A47-2Meg-Z	Q13-139	U-55	Volume
B	Shaft			AK-4	KSS-3	Not Req.	Not Req.	Attach to R1A
C	Switch			KB-1	SWE-12	76-1	US-26	Attach to R1A
R2A	200K	½		AB-46	A47-200K-S	Q11-129	U-43	Tone
B	Shaft			AK-4	KSS-3	Not Req.	Not Req.	Attach to R2A

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA Columbia Records PART No.	IRC PART No.	NOTES
R3	1Meg			BTS-1Meg	
R4	33K			BTS-33K	
R5	150Ω			BTS-150	

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA Columbia Records PART No.	IRC PART No.	NOTES
R6	10K			BTS-10K	
R7	150Ω	1		BTA-150	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA Columbia Records PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	2.2K	3-4Ω		Z1101	A-3025	A-3332	26S58 ①	S-12X	① Drill one new mounting hole.

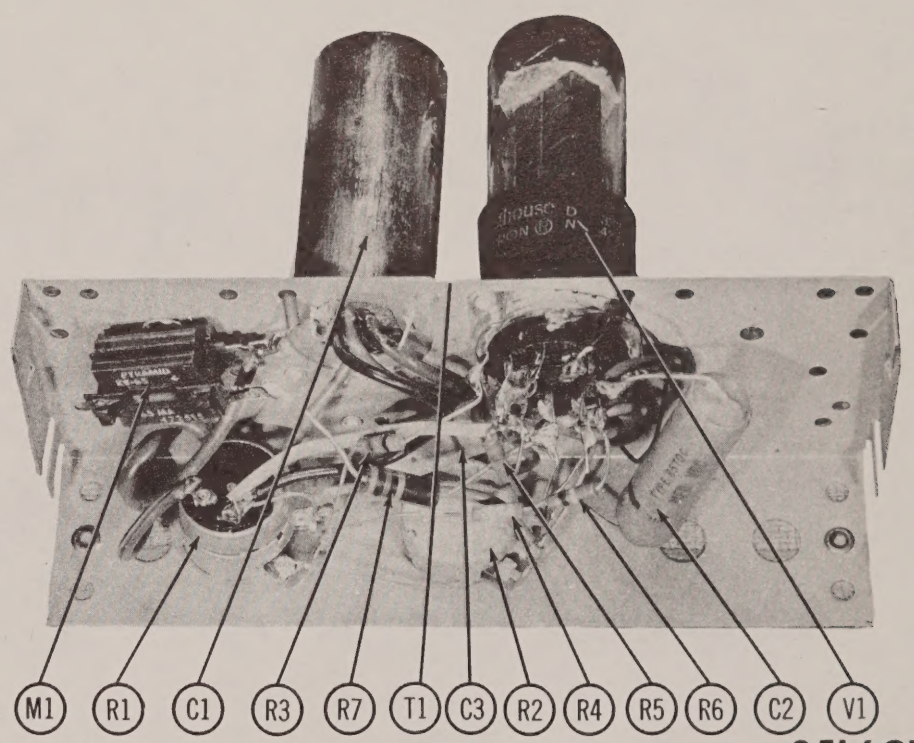
SPEAKER

ITEM No.	RATINGS SIZE	RATINGS FIELD	RATINGS V. C. IMP.	REPLACEMENT DATA Columbia Records PART No.	QUAM PART No.	RCA TYPE No.	NOTES
SP1	4"	PM	3-4Ω		4A1	30482	

SELENIUM RECTIFIER

ITEM No.	RATING CURRENT	REPLACEMENT DATA Columbia Records PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	NOTES
M1	.043A		1263A	RS065	6S65	8J1	65	

CHASSIS—BOTTOM VIEW



25L6GT

PHONO CARTRIDGE

ITEM No.	REPLACEMENT DATA Columbia Records PART No.	ASTATIC PART No. CARTRIDGE	ASTATIC PART No. NEEDLE	ELECTRO-VOICE PART No. CARTRIDGE	ELECTRO-VOICE PART No. NEEDLE	REMARKS
M2		112-TS	A-1 & A-3	46-T	0-1 or S-1 & 0-3	* Complete Astatic arm & cartridge assembly. Should be mounted to make certain lid can be closed when the arm is in rest position. ♦ Complete Electro-Voice arm and cartridge assembly
		*P-55-T		♦ 2447		

ASTATIC AND ELECTRO-VOICE NEEDLE LISTINGS SHOWN ABOVE ARE SPECIFIED FOR THE RESPECTIVE REPLACEMENT CARTRIDGES LISTED. FOR ORIGINAL CARTRIDGE NEEDLE REPLACEMENTS SEE BELOW.

PHONO NEEDLE

(FOR REPLACEMENT IN ORIGINAL EQUIPMENT CARTRIDGE)

ITEM No.	REPLACEMENT DATA Columbia Records PART No.	FIDELITONE PART No.	JENSEN PART No.	WALCO PART No.	REMARKS
M3		†A-142 or ♦A-142D and †C-143 or ♦C-143D	†CR-55 or ♦CR-55D and †CR-55LP or ♦CR-55LPD	TW-64S and †W-64MGS	† Jewel ♦ Diamond

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

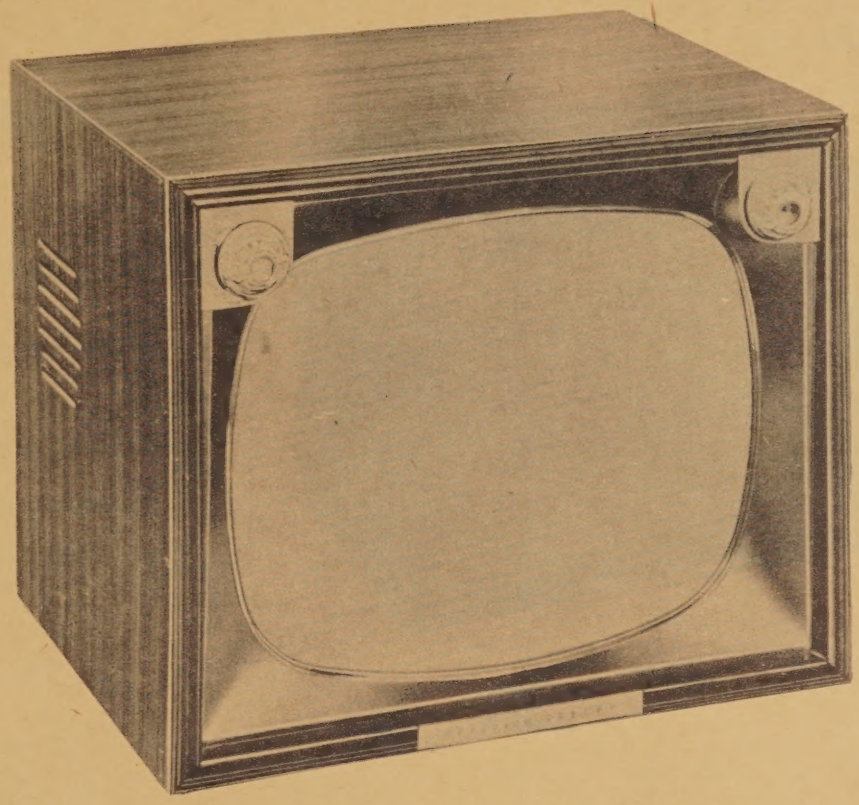
PHOTOFACT* Folder

*TRADE MARK

IMPORTANT FILING NOTICE

The contents for this envelope will be found among the last folders in this complete set of folders . . . unless it has been purchased as part of a *complete* volume of PHOTOFACTS assembled in a DeLuxe Binder.

Merely insert the corresponding folder on this model in this envelope to retain proper filing and indexing order.



CORONADO MODEL TV2-9324A

TRADE NAME	Coronado	MODELS TV2-9324A, TV2-9324B, TV2-9325A, TV2-9326A, TV2-9326B, TV2-9327A, TV2-9334A, TV2-9334B, TV2-9335A, TV2-9336A, TV2-9336B, TV2-9337A, TV2-9350A, TV2-9350B, TV2-9351A, TV2-9352A, TV2-9352B, TV2-9353A
SUPPLIER	Gamble-Skogmo, Inc., 15 N. 8th. St., Minneapolis, Minn.	
TYPE SET	Television Receiver	
TUBES	Sixteen	
POWER SUPPLY	110-120 Volts AC-60 Cycle	RATING 1.38 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)	

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- Resistor Identification 4, 9

Photographs (Cont)
- Trans., Inductor & Alignment Identification 15

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Schematic (TV) 2
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Tube Placement Chart (Bottom View) 8
Tube Placement Chart (Top View) 5

CORONADO MODELS TV2-9324A, B, TV2-9325A, TV2-9326A, B, TV2-9327A, TV2-9334A, B, TV2-9335A, TV2-9336A, B, TV2-9337A, TV2-9350A, B, TV2-9351A, TV2-9352A, B, TV2-9353A

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PHOTOFACT* Folder
*TRADE MARK

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L. F. D[illegible]

DISASSEMBLY INSTRUCTIONS

CABINET REMOVAL

1. Remove 4 push-on type control knobs from front panel of cabinet.
2. Remove 2 metal screws holding upper left trim plate.
3. Remove 3 small knobs.
4. Remove 5 wood screws and 1 metal screw. Remove rear cover.
5. Disconnect speaker leads.
6. Remove 2 wood screws holding rear cabinet braces at the top.
7. Remove 6 cabinet bolts. Lift cabinet up and off.
8. Remove 2 speaker nuts. Remove speaker.

MODEL

TV2-9324A

CORONADO MODELS TV2-9324A, B, TV2-9325A, TV2-9326A, B, TV2-9327A, TV2-9334A, B, TV2-9335A, TV2-9336A, B, TV2-9337A, TV2-9350A, B, TV2-9351A, TV2-9352A, B, TV2-9353A

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the VHF tuner oscillator circuit may be accomplished by removal of the channel selector and fine tuning knobs and 2 metal screws holding trim plate, adjustments are accessible, one at a time, thru the small hole in the cabinet to the right and below the channel selector shaft.

PICTURE TUBE SAFETY GLASS CLEANING

To clean safety glass, remove 7 push-on type control knobs from front panel of cabinet. Remove 4 metal screws holding 2 trim plates. Remove trim plates. Tilt safety glass forward and lift out. Use extreme caution when removing safety glass.

PICTURE TUBE REMOVAL

For picture tube removal it is necessary to remove chassis. (See disassembly instructions).

SERVICE ADJUSTMENT LOCATION

See tube placement chart on page 5.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to the set. Adjustment is located on the tube side of the chassis. Set the horizontal hold control at the center of its range and adjust the horizontal frequency slug (L23) until picture synchronizes horizontally.

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, it is necessary to remove the rear cover and supply power to the chassis. Adjust the buzz control (R7) for maximum volume and minimum buzz.

CENTERING

Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube, located flush against the deflection yoke. Rotate the two rings around the neck of the tube until the picture is properly centered.

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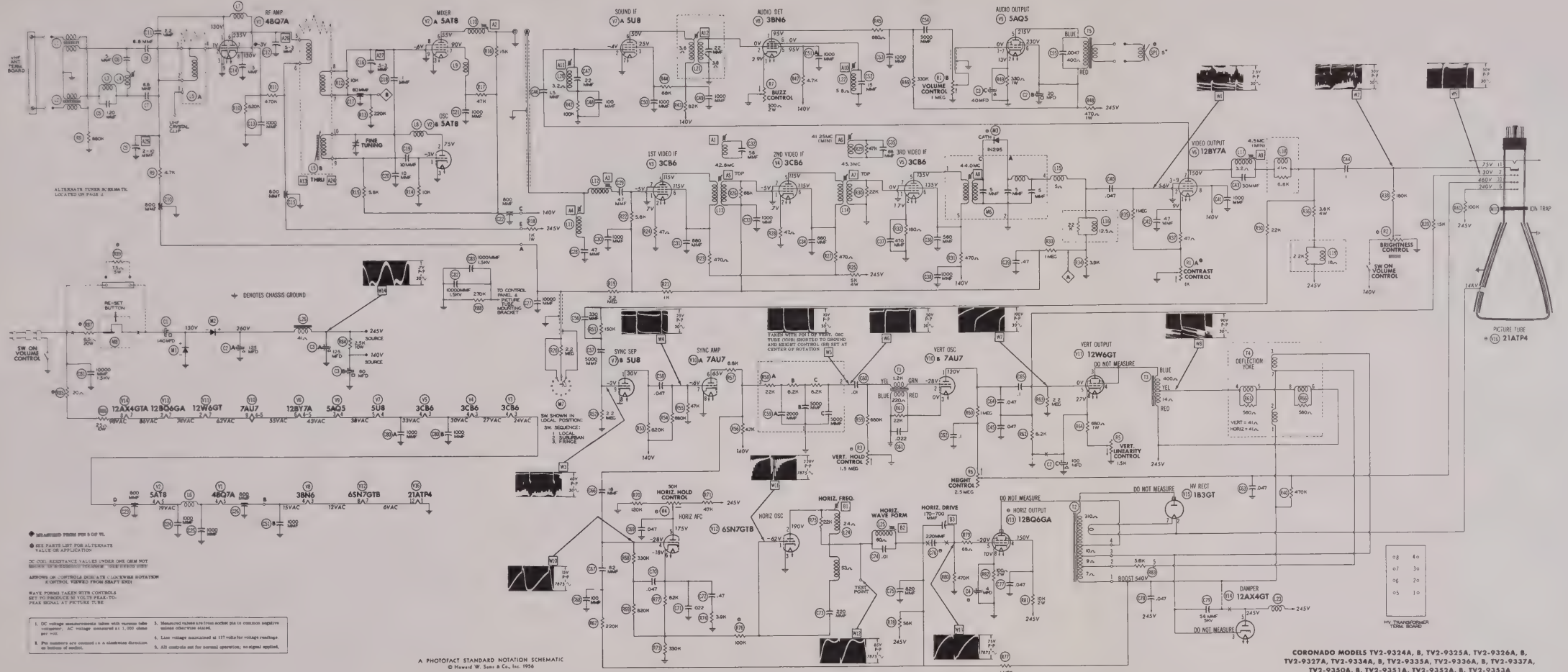
RF AMP V1 4BQ7A
MIXER V7A 5AT8
OSC V7B 5AT8
SOUND IF V7A 5U8
AUDIO DET V8 3BN6
AUDIO OUTPUT V5 5AQ5
1ST VIDEO IF V3 3CB6
2ND VIDEO IF V4 3CB6
3RD VIDEO IF V5 3CB6
VIDEO OUTPUT V6 12BY7A
VERT OUTPUT V11 12W6GT
VERT OSC V10B 7AU7
SYNC AMP V10A 7AU7
SYNC SEP V7B 5U8
HORIZ OSC
HORIZ AFC V13 6SN7GTB
HORIZ OUTPUT V13 12BQ6GA
HV RECT V15 1B3GT
DAMPER V14 12AX4GT
PICTURE TUBE V16 21ATP4
ION TRAP
VOLUME CONTROL 1 MEG
BUZZ CONTROL
CONTRAST CONTROL 1K
BRIGHTNESS CONTROL
SW ON VOLUME CONTROL
RE-SET BUTTON
HEIGHT CONTROL 2.5 MEG
VERT. LINEARITY CONTROL 1.5K
VERT. HOLD CONTROL 1.5 MEG
HORIZ. HOLD CONTROL
HORIZ. FREQ.
HORIZ. WAVE FORM
HORIZ. DRIVE
FINE TUNING
DEFLECTION YOKE
BOOST 540V
DO NOT MEASURE
TEST PORT
DENOTES CHASSIS GROUND
ALTERNATE TUNER SCHEMATIC LOCATED ON PAGE 11
TO CONTROL PANEL & PICTURE TUBE MOUNTING BRACKET
SW SHOWN IN LOCAL POSITION:
SW. SEQUENCE: LOCAL SUBURBAN & FRINGE
TAKEN WITH PIX TOP VERT. OSC TUBE (V10B) SHORTED TO GROUND AND HEIGHT CONTROL (R6) SET AT CENTER OF ROTATION
12AX4GTA 12BQ6GA 12W6GT 7AU7 12BY7A 5AQ5 5U8 3CB6 3CB6 3CB6
5AT8 4BQ7A 3BN6 6SN7GTB 21ATP4
HV TRANSFORMER TERM. BOARD

◆ MEASURED FROM PIN 5 OF V1.

● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC VOLT. RESISTANCE VALUES UNDER ONE OHM NOT SHOWN IN SCHEMATIC DIAGRAM. SEE PARTS LIST.

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

WAVE FORMS TAKEN WITH CONTROLS SET TO PRODUCE 30 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE

1. DC voltage measurements taken with vacuum tube voltmeter. AC voltage measured at 1,000 ohms per volt.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation; no signal applied.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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CORONADO MODELS TV2-9324A, B, TV2-9325A, TV2-9326A, B, TV2-9327A, TV2-9334A, B, TV2-9335A, TV2-9336A, B, TV2-9337A, TV2-9350A, B, TV2-9351A, TV2-9352A, B, TV2-9353A

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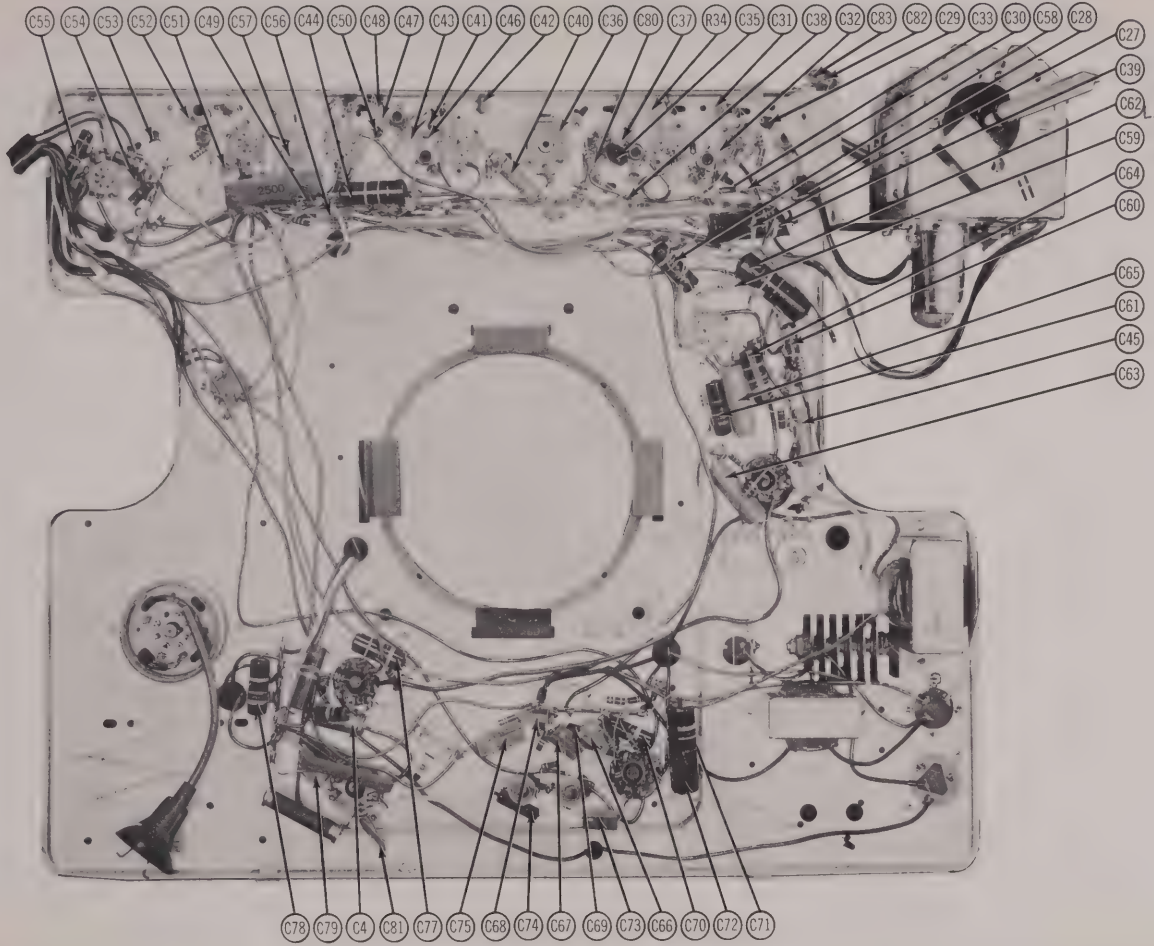

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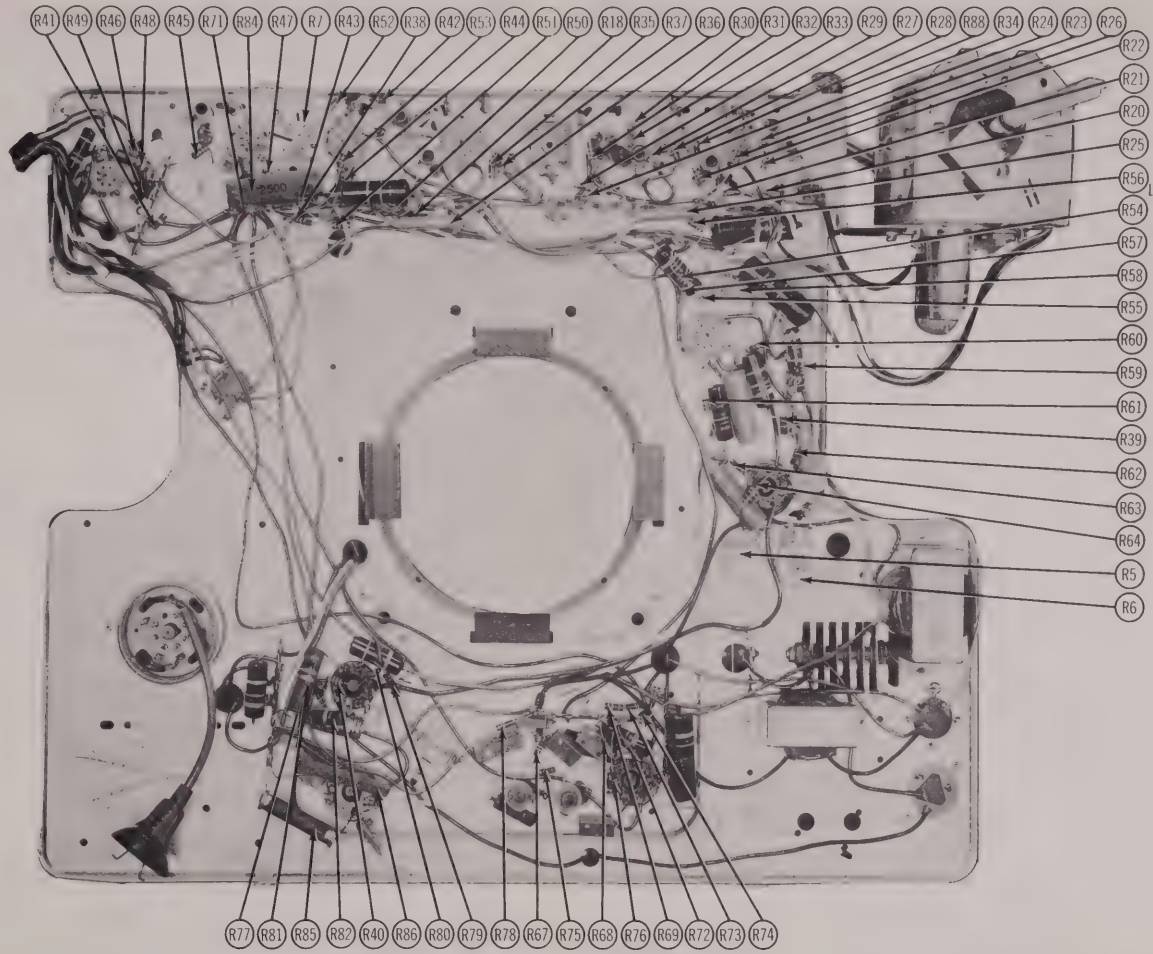
CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

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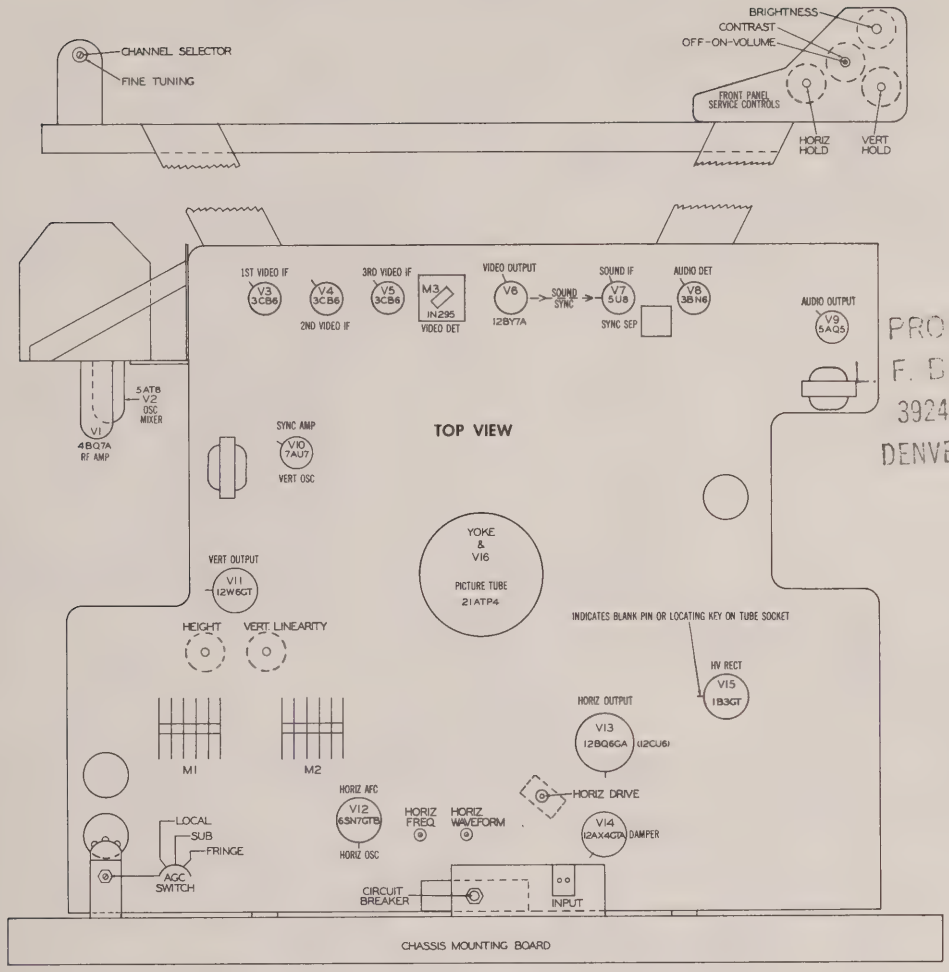
DENVER, COLORADO

CORONADO MODELS TV21-9324A, B, TV21-9325A, TV21-9326A, B, TV21-9327A, TV21-9334A, B, TV21-9335A, TV21-9336A, B, TV21-9337A, TV21-9350A, B, TV21-9351A, TV21-9352A, B, TV21-9353A

TUBE PLACEMENT CHART



PROPERTY OF
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3924 MEADE ST.
DENVER, COLORADO

TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce the indicated symptoms. Refer to tube placement chart for location and type of tube.

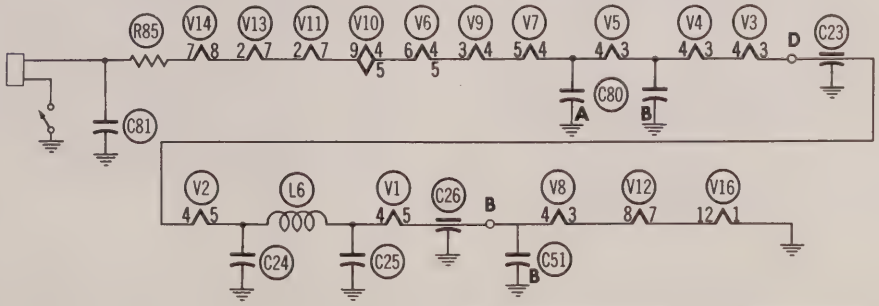
POWER SUPPLY FAILURE
No raster, no sound - **Selenium Rectifiers (M1 & M2)**

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - **V2, V3, V4, V5, V6**
No pic, no sound, has snow - **V1, V2, V3**
No pic, has sound, has raster - **V6, V16**
Has pic, no sound - **V7, V8, V9**

SYNC FAILURE
No vert. sync - **V10**
No horiz. sync - **V10, V12**
No vert. or horiz. sync - **V7, V10**

SWEEP FAILURE
No raster, has sound - **V12, V13, V14, V15, V16**
No vertical deflection - **V10, V11**
Poor vert. linearity or foldover - **V10, V11**
Poor horiz. linearity or foldover - **V12, V13, V14**
Narrow picture - **V12, V13, V14, V15, M1 & M2**
Vert. off freq. - **V10**
Horiz. off freq. - **V10, V12**

NOTE: Since this receiver employs tubes used in series-parallel filament network, an open filament in any tube in series may cause the set to be inoperative. (See circuit below).



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage lead should be securely taped away from the chassis. Do not remove the horizontal oscillator (V12) to disable the high voltage.
Use an isolation transformer to protect the test equipment.

VIDEO IF ALIGNMENT

Connect the negative lead of a 1.5 volt bias supply to the ungrounded side of C33. Connect positive side to chassis.
Adjust sweep output to give adequate deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Direct	High side to an ungrounded tube shield floating over converter tube (V2). Low side to chassis.	44MC (10MC Swp)	47.25MC	Any non-interfering channel	Vert. Amp. thru detector probe (Fig. 1)., to pin 5 (plate) of 3CB6 (V3). Low side to chassis.	A1, A2, A3, A4	Adjust for response curve similar to Fig. 2. A1 positions the 47.25MC marker in trap notch. A2, A3 and A4 is adjusted for maximum amplitude with proper tilt and markers properly positioned as in Fig. 2.
2.	"	"	Not used	42.8MC	"	USE VTVM DC probe to point (A). Common to chassis.	A5	Adjust for maximum deflection.
3.	"	"	"	41.25MC	"	"	A6	Adjust for MINIMUM deflection.
4.	"	"	"	45.3MC	"	"	A7	Adjust for maximum deflection.
5.	"	"	"	44.0MC	"	"	A8	Adjust for maximum deflection.
6.	"	"	44MC (10MC Swp)	41.25MC 42.4MC 42.8MC 44.0MC 44.5MC 45.3MC 45.75MC 47.25MC	"	Vert. Amp. thru 10KΩ to point (A). Low side to chassis.		If response is not similar to Fig. 3, make SLIGHT corrective adjustments. The position of the 44.5MC marker is critical. A8 controls the symmetry of the top. A7 controls the height of the 45.75MC marker. DO NOT readjust A2 or A3. These adjustments should only be made as outlined in Step 1.

4.5MC TRAP ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
7.	.005MFD	High side to pin 2 (grid) of 12BY7 (Video Output). Low side to chassis.	4.5MC (Unmod)	Any	DC probe to pin 11, (cathode) of picture tube. Common to chassis.	A9	Adjust for MINIMUM deflection.

SOUND IF ALIGNMENT USING ON THE AIR SIGNAL

Turn the set on and tune in a strong TV signal. Turn the buzz control (R7) 90 degrees from maximum clockwise rotation. Adjust A10 for maximum volume. Reduce the signal strength. (Remove the antenna from the antenna terminals and stray feed the signal by placing the antenna near the antenna terminals).
Adjust A11 and A12 for maximum volume. Adjust R7 for minimum noise. Reconnect antenna and readjust A10 for maximum volume. If necessary, reduce volume so this peak can be heard.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
Set volume control at a low volume level.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	.01MFD	High side to pin 2 (grid) of 12BY7 (V6). Low side to chassis.	4.5MC (400% Mod) (50KC Swp)	4.5MC	Any non-interfering channel	Across secondary of T5.	A10	Set buzz control (R7) 90 degrees from maximum clockwise rotation. Adjust A10 for maximum 400% indication on scope.
9.	"	"	"	"	"	"	A12, A11	Attenuate generator output so that signal is below limiting level of 3BN6 as evidenced by background hiss and noise. Adjust A12 and A11 for maximum 400% indication on scope.
10.	"	"	"	4.5MC (400% Mod)	"	"	R7	Use a high generator output and adjust R7 for MINIMUM 400% indication on scope.
11.	"	"	"	4.5MC	"	"	A10	With volume control at low level, retouch A10 for maximum 400% indication on scope.

VHF OSCILLATOR ALIGNMENT

Connect the negative lead of a 4.5 volt bias supply to the ungrounded side. of C33. Connect the positive lead to chassis.
Set the fine tuning control to the mid-position of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
12.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. Amp. thru 10KΩ to point (A). Low side to chassis.	A13	Adjust to place sound marker in trap notch as in Fig. 4. Video marker should be at 50%.
			207MC (10MC Swp)	205.25MC 209.75MC	12		A14	
			201MC (10MC Swp)	199.25MC 203.75MC	11		A15	
			195MC (10MC Swp)	193.25MC 197.75MC	10		A16	
			189MC (10MC Swp)	187.25MC 191.75MC	9		A17	
			183MC (10MC Swp)	181.25MC 185.75MC	8		A18	
			177MC (10MC Swp)	175.25MC 179.75MC	7		A19	
			85MC (10MC Swp)	83.25MC 87.75MC	6		A20	
			79MC (10MC Swp)	77.25MC 81.75MC	5		A21	
			69MC (10MC Swp)	67.25MC 71.75MC	4		A22	
			63MC (10MC Swp)	61.25MC 65.75MC	3		A23	
			57MC (10MC Swp)	55.25MC 59.75MC	2		A24	

ALIGNMENT INSTRUCTIONS (cont)

VHF RF AND MIXER ALIGNMENT

Connect bias as under "VHF Oscillator Alignment".
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	207MC (10MC Swp)	205.25MC 209.75MC	12	Vert. Amp. thru 10KΩ to point (B). Low side to chassis.	A25, A26, A27	Adjust for response similar to Fig. 5.
14.	"	"	213MC (10MC Swp)	211.25MC 215.75MC	13	"		Check for response similar to Fig. 5. If markers fall below 70% on any channel make SLIGHT compromise adjustment of A25, A26 and A27 with channel switch set to that channel. Recheck all other channels to see that they have not been seriously affected.
			201MC (10MC Swp)	199.25MC 203.75MC	11			
			195MC (10MC Swp)	193.25MC 197.75MC	10			
			189MC (10MC Swp)	187.25MC 191.75MC	9			
			183MC (10MC Swp)	181.25MC 185.75MC	8			
			177MC (10MC Swp)	175.25MC 179.75MC	7			
			85MC (10MC Swp)	83.25MC 87.75MC	6			
			79MC (10MC Swp)	77.25MC 81.75MC	5			
			69MC (10MC Swp)	67.25MC 71.75MC	4			
			63MC (10MC Swp)	61.25MC 65.75MC	3			
			57MC (10MC Swp)	55.25MC 59.75MC	2			

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UHF TUNER ALIGNMENT

The UHF portion of this receiver has been properly aligned at the factory and is very stable. Alignment of the UHF portion of this set is not recommended in the field.

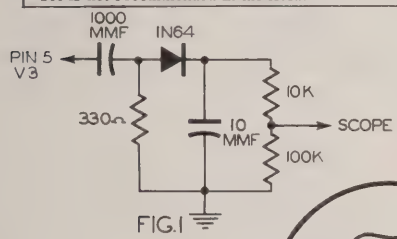


FIG.1

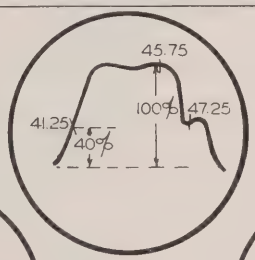


FIG.2

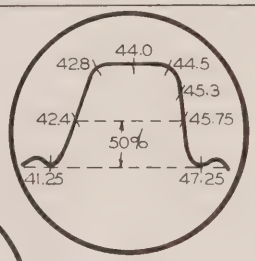


FIG.3

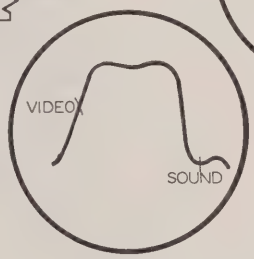


FIG.4

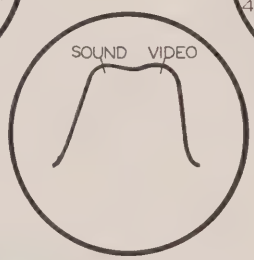
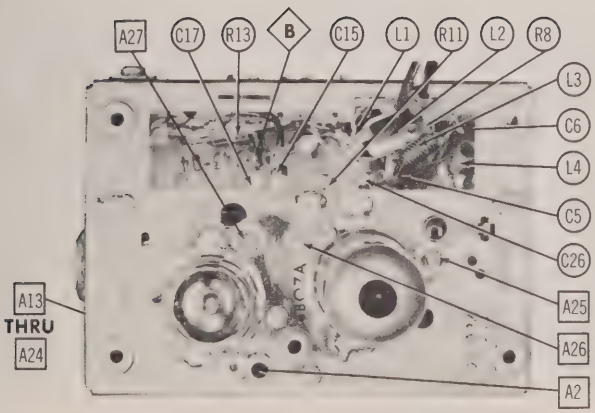
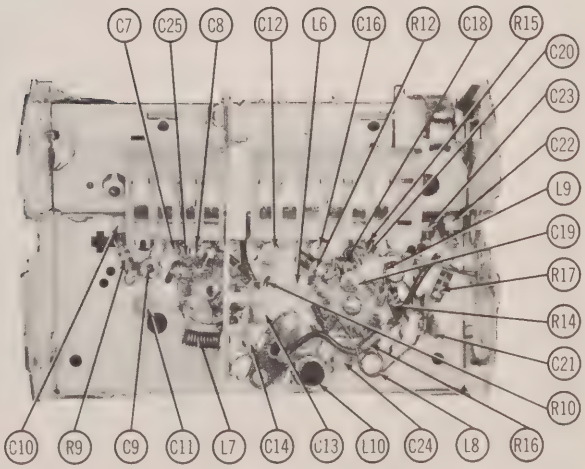


FIG.5



RF TUNER TOP VIEW

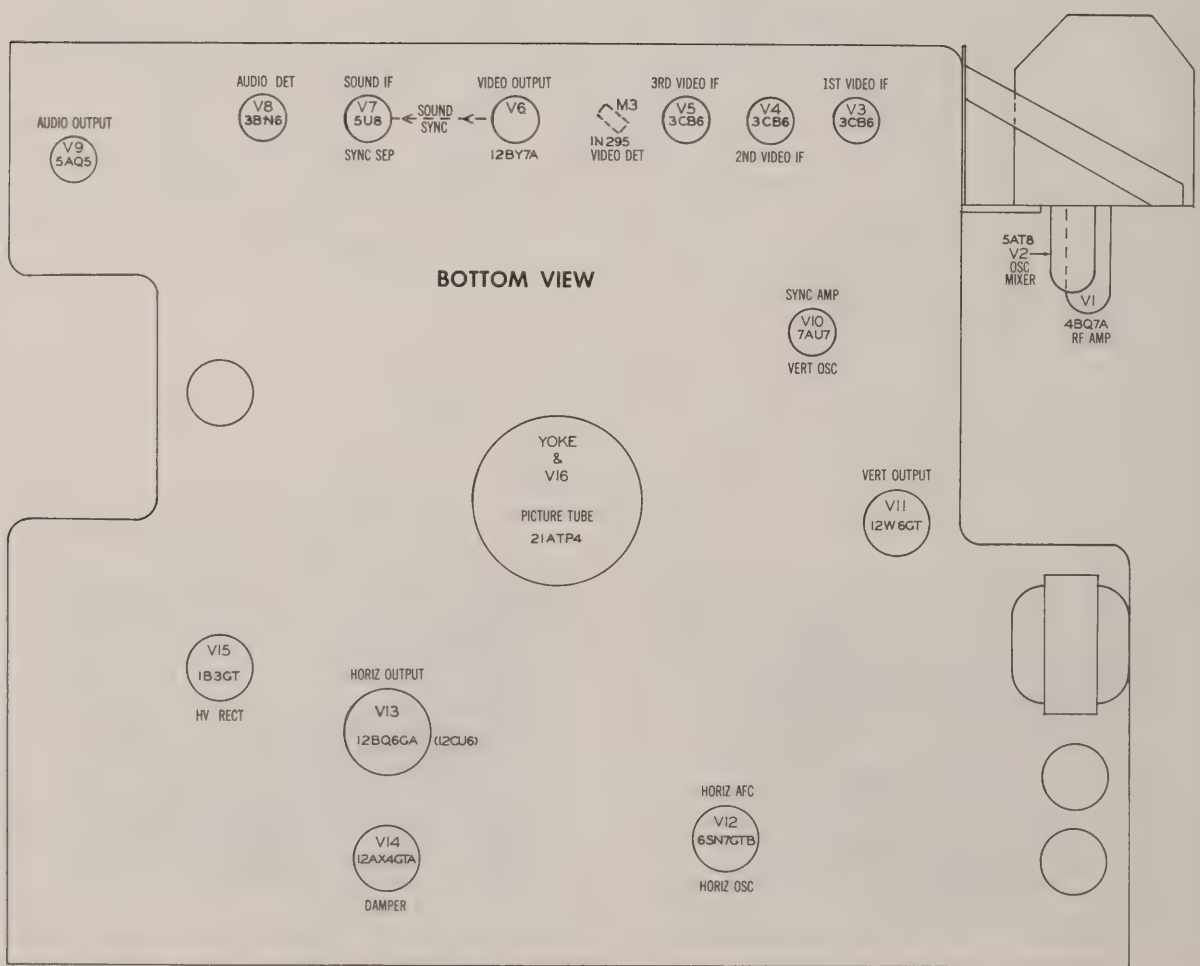


RF TUNER BOTTOM VIEW

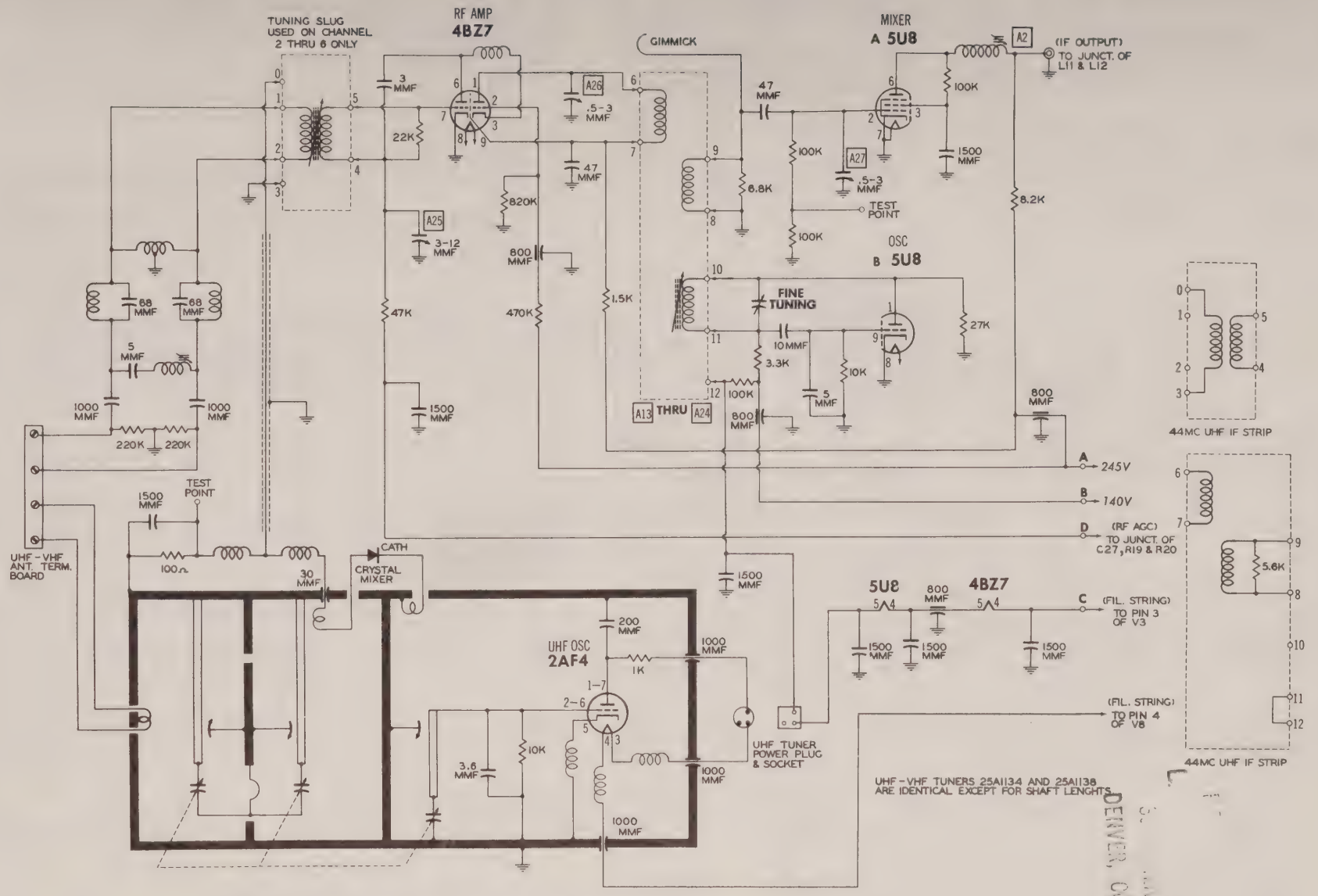
RESISTANCE MEASUREMENTS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	4BQ7A	INF	3Meg	0Ω	5Ω	4Ω	† 1KΩ	300KΩ	INF	0Ω
V 2	5AT8	10KΩ	† 8. 1KΩ	0Ω	6Ω	5Ω	† 18KΩ	† 50KΩ	0Ω	220KΩ
V 3	3CB6	1Meg	47Ω	6Ω	7Ω	† 5. 5KΩ	† 5. 5KΩ	0Ω		
V 4	3CB6	1Meg	47Ω	7Ω	8Ω	† 5. 5KΩ	† 5. 5KΩ	0Ω		
V 5	3CB6	. 2Ω	180Ω	8Ω	9Ω	† 3KΩ	† 3KΩ	0Ω		
V 6	12BY7A	260Ω	1Meg	0Ω	11Ω	11Ω	12Ω	† 3. 6KΩ	† 2. 5KΩ	0Ω
V 7	5U8	† 820KΩ	100KΩ	† 150KΩ	9Ω	10Ω	† 85KΩ	0Ω	0Ω	2. 2Meg
V 8	3BN6	250Ω	3. 6Ω	3Ω	4Ω	† 7. 2KΩ	5. 8Ω	† 330KΩ		
V 9	5AQ5	50KΩ	330Ω	11Ω	10Ω	† 900Ω	† 550Ω	50KΩ		
V 10	7AU7	▲ 2. 5Meg	1Meg	220Ω	12Ω	12Ω	† 14KΩ	47KΩ	0Ω	13Ω
V 11	12W6GT	TP	15Ω	† 450Ω	† 450Ω	2, 2Meg	NC	13Ω	1. 2KΩ	
V 12	6SN7GTB	430KΩ	† 56KΩ	0Ω	1. 4Meg	† 40KΩ	400KΩ	2Ω	3Ω	
V 13	12BQ6GA	NC	17Ω	TP	† 10 KΩ	470KΩ	TP	15Ω	100Ω	TOP CAP ▲ 10Ω
V 14	12AX4GTA	TP	NC	1Meg	NC	† 41Ω	NC	17Ω	20Ω	
V 15	1B3GT		PINS	1-8	HAVE	INF	RESISTANCE			TOP CAP ▲ 320Ω
V 16	21ATP4	0Ω	25KΩ	PIN 6 † 100KΩ	PIN 10 ▲ 470KΩ	PIN 11 † 300KΩ	PIN 12 2Ω			

† MEASURED FROM OUTPUT OF M2.
▲ MEASURED FROM PIN 3 OF V14.
TP-TIE POINT.
NC-NO CONNECTION.



TUBE PLACEMENT CHART


TUNING SLUG USED ON CHANNEL 2 THRU 6 ONLY
RF AMP 4BZ7
GIMMICK
MIXER A 5U8
(IF OUTPUT) TO JUNCT. OF L11 & L12
OSC B 5U8
FINE TUNING
TEST POINT
A13 THRU A24
44MC UHF IF STRIP
A 245V
B 140V
D (RF AGC) TO JUNCT. OF C27, R19 & R20
C (FIL. STRING) TO PIN 3 OF V3
(FIL. STRING) TO PIN 4 OF V8
UHF - VHF ANT. TERM. BOARD
CRYSTAL MIXER
UHF OSC 2AF4
UHF TUNER POWER PLUG & SOCKET
5U8
4BZ7

UHF - VHF TUNER 25A1134 AND 25A1138 USED WITH UHF MODELS

UHF - VHF TUNERS 25A1134 AND 25A1138 ARE IDENTICAL EXCEPT FOR SHAFT LENGHTS.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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ALTERNATE UHF-VHF TUNER SCHEMATIC

DENVER, COLORADO

CORONADO MODELS TV2-9324A, B, TV2-9325A, TV2-9326A, B, TV2-9327A, TV2-9334A, B, TV2-9335A, TV2-9336A, B, TV2-9337A, TV2-9350A, B, TV2-9351A, TV2-9352A, B, TV2-9353A

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No	USE	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	NOTES
V1	R F Amplifier	6BQ7A	6BQ7A	
V2	Mixer-Osc	5A79	5A79	
V3	Ist. Video IF Amplifier	3CB6	3CB6	
V4	2nd Video IF Amplifier	3CB6	3CB6	
V5	3rd Video IF Amplifier	3CB6	3CB6	
V6	Video Output	12BY7A	12BY7A	
V7	Sound IF Amplifier-Sync Separator	5U8	5U8	
V8	Audio Detector	3BN6	3BN6	
V9	Audio Output	6AQ5	6AQ5	
V10	Sync Amplifier-Vert. Oscillator	7AU7	7AU7	
V11	Vert. Output	12W6GT	12W6GT	
V12	Horiz. AFC-Horiz Osc.	6SN7GTB	6SN7GTB	
V13	Horiz. Output	12BQ6GA	12BQ6GA	12CU6 or 12DQ6 may be used as an alternate
V14	Damper	12AX4GTA	12AX4GTA	
V15	HV Rectifier	1B3GT	1B3GT	

CATHODE-RAY TUBE

ITEM No	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: CBS PART No.	REPLACEMENT DATA: GENERAL ELECTRIC PART No.	REPLACEMENT DATA: SYLVANIA PART No.	NOTES
V16	21AYP4 ①	21AYP4 ①	21AYP4 ①	21AYP4 ② ①	① Aluminized ② Silver screen "B5"
	24YP4 ①	24YP4 ①	24YP4 ①	24YP4 ②	

ELECTROLYTIC CAPACITORS

ITEM No	RATING: CAP	RATING: VOLT	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: MALLORY PART No.	REPLACEMENT DATA: PYRAMID PART No.	REPLACEMENT DATA: SANGAMO PART No.	REPLACEMENT DATA: SPRAGUE PART No.
C1	40	150	45X421	AFHBI-70	XA004	FP1J1	TM-140-150	S-100	TVL-1428
C2A	125	300	45X419		D029	FP3J8	TM-1020-300	D-150	TVL-3588
B	40	300			BR1250	TC3001	TM-1020-300	MVH-8010	TVA-1310
C	100	50							
C3A	125	300	45X429				Q-32L 5	5	TVL-4534
B	60	300					FM-4530		TVA-1510
C	40	50							
C4	4	50	(Note 1)	PHS190V4	BR550	TC30	TD-4-50	MMT-0505	TVA-1353

Note 1. Some versions may use a 5MFD unit (part #45X418) in this application.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No	RATING: CAP	RATING: VOLT	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: MALLORY PART No.	REPLACEMENT DATA: SPRAGUE PART No.	NOTES
C5	120		13LA91J3LK	BPD-00013	DM-121	TP35	GP3K-121	UC-5313	5GA-T13	
C6	5		13LAC05DD	NPO-D15	TC2-ER7	Z011	MP0A-050	ET-555	5TCCB-V47	
C7	6.8		13LAC68AL	NPO-D26.8	TC2-ER8	Z013	MP0A-ER6	ET-5566	5TCCB-V66	
C8	6.8		13LAC68AS	NPO-D26.8	TC2-ER8	Z013	MP0A-ER6	ET-5566	5TCCB-V66	
C9	2-20		31B-001		939-3					
C10	600		13M-320BA-102SC							
C11	2.2		13LBGP2R2C	NPO-SH1.3	TC2-ER3	Z006	MP0A-2R2		5TCCB-V22	
C12	5-3		31B-903		939-3		31L5-01-QR5	CT565A		
C13	1000		13LBX10E2	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C14	1.8		13LBC1R5C	NPO-SL1.5	TC2-1R5	Z004	MP0A-1R5	ET-5615	5TCCB-V15	
C15	800		13M-320EA-107SC							
C16	5-3		31B-903		939-3		31L5-01-QR5	CT565A		
C17	60		13M-330Q-600J							
C18	1		13D-1H-3	NPO-6H1	TC2-1	TZ03	MP0A-010		5TCCB-V1	
C19	10		13LBJ10D							
C20	10		13LBX10D							
C21	1000		13LBX10F2	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C22	800		13M-320BA-102SC							
C23	800		13M-320EA-102SC							
C24	1000		13LBX10E2	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C25	1000		13LBX10E2	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C26	800		13M-320EA-102SC							
C27	10000		47X596	BPD-01	DD-103	KD62	811-01	DC-511	5HK-H1	
C28	5		47X503	S247	D6-470	TP38	GP3K-470	UC-5447	5GA-Q47	
C29	47		47X503	S247	D6-470	TP38	GP3K-470	UC-5447	5GA-Q47	
C30	1000		90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C31	680		90X5	BPD-00068	DD-681	KD65	811-681	UC-5368	5GA-T68	
C32	56			NPO-S156	TC2-56	Z036	MP0A-560		5TCCB-V56	
C33	1000		90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C34	680		90X5	BPD-00068	DD-681	KD65	811-681	UC-5368	5GA-T68	
C35	68			NPO-S168	TC2-68	Z038	MP0A-680		5TCCB-V68	
C36	560		90X9	SH560	DD-561	GD63	811-561	UC-5356	5GA-T56	
C37	560		90X4	BPD-00047	DD-561	KD60	811-471	UC-5347	5GA-T47	
C38	1000	300	90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C39	.47	300	RCP10M3474M	PS82N-47		CUS2P47		PT4D47	3TM-P47	
C40	.047	300	RCP10M3473M	BPD-05	DF-503	CUS2S47		PT4F47	3TM-S47	
C41	1000		90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C42	.47		47X503	S247	D6-470	TP39	GP3K-470	UC-5447	5GA-Q47	
C43	30		47X569							
C44	.1	400	RCP10M1034M	P488N-1	DF-104	CUB4P1		PT401	4TM-P1	
C45	.047	300	RCP10M3473M	BPD-05	DF-503	CUS2S47		PT4F47	3TM-S47	
C46	1.5		47X584	NPO-SL1.5	TC2L-1R5	TZ04	MP0A-1R5	ET-5615	5TCCB-V15	
C47	33		47X571							
C48	100		90X5	BPD-0001	DD-101	GD43	801-101	DC-531	5GA-T1	
C49	1000		90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C50	1000		90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C51A	1000		90X3	BPD-2X001	DDB-103	DKD69	813-001	DCD-531	5HK-XD1	
B	1000									
C52	15		47X572							
C53	1000		90X1	BPD-001	DD-103	KD69	801-001	DC-531	5HK-D1	
C54	5000		47X507	BPD-006	DD-502	KD80	811-006	DC-525	5HK-D5	
C55	.0047	600	RCP10M4742M	S2470	D6-472	CUBD47	GP3-523-472	PT5D47	5TM-D47	
C56	330	500	47X570	1469-00023	D6-331	SR3733	811-331		M8-333	
C57	5000		47X507	BPD-005	DD-502	KD80	811-006	DC-525	5HK-D5	
C58	.047	400	RCP10M4473M	BPD-05	DF-503	CUB4S47		PT4H47	4TM-S47	
C59A	2000		47EX7	4PA-110	4PC-100	41H5TM1	4106S-01	DC-522	4V-1	
B	5000							DC-525		
C	5000							DC-525		

CAPACITORS (cont)

ITEM No	RATING: CAP	RATING: VOLT	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: AEROVOX PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CORNELL-DUBILIER PART No.	REPLACEMENT DATA: ERIE PART No.	REPLACEMENT DATA: MALLORY PART No.	REPLACEMENT DATA: SPRAGUE PART No.	NOTES
C60	.01	400	RCP10M1033M	BPD-01	DS-103	CUB4S1	GP3-333-103	PT401	4TM-S1	
C61	.033	200	RCP10M2333M	BPD-03	DD-303	CUB4S33	811-02	PT4J33	4TM-S33	
C62	.1	600	RCP10M6104M	P868N-1	DF-104	CUB6P1		PT601	6TM-P1	
C63	.047	600	RCP10M6473M	BPD-05	DF-503	CUB6S47		PT6F47	6TM-S47	
C64	.047	400	RCP10M4473M	BPD-05	DF-503	CUB4S47		PT4F47	4TM-S47	
C65	.1	400	RCP10M1043M	P488N-1	DF-104	CUB4P1		PT401	4TM-P1	
C66	18	500	1469-00018	1469-00018	DM-180	SR5Q18	831-180		MS-418	
C67	82	500	1469-00082	1469-00082	DM-820	SR5Q82	801-820		MS-482	
C68	100	500	1469-00101	1469-00101	DM-101	SR5T1	901-101	MC8238	MS-31	
C69	.047	400	RCP10M4473M	BPD-05	DF-503	CUB4S47		PT4H47	4TM-S47	
C70	.047	200	RCP10M2473M	BPD-05	DF-503	CUB2S47		PT4J47	4TM-S47	
C71	.022	200	RCP10M2223M	BPD-03	DD-303	CUB4S33	811-03	PT4J33	4TM-S33	
C72	.47	200	RCP10M2474M	P388N-47		CUS2P47		PT4D47	2TM-P47	
C73	220	400	RCP10M3224K	1469-00023	D6-331	SR3733	811-331	MC8240	MS-333	
C74	.01	400	RCP10M1034M						4TM-S1	
C75	820	500	RCM5J821K	1464-00023		1R5T82	811-821		MS-382	
C76	220		90X10	1469-00023	D6-331	SR5T33	811-331	MC8240	MS-333	Note 2
C77	.047	400	RCP10M4473M	BPD-05	DF-503	4TM-S47		PT4H47	4TM-S47	
C78	.047	400	RCP10M4473M	BPD-05	DF-503	4TM-S47		PT4H47	4TM-S47	
C79	58	5000	47X755		D26D-560				7GA-Q58	
C80A	1000		90X3	BPD-2X001	DDB-103	DKD69	813-001	DCD-531	5HK-XD1	
B	1000									
C81	10000	1500	47X615		D10D32					
C82	10000	1500	47X615		D10D33					
C83	1000	1500	47X573	HVD-15-1000	DD30-102	MCDJ	IR5KV-102	DC-3021	30GA-D1	

Note 2. Not used in some versions.
Items C59A, C59B, C59C, B58A, B58B and R58C are combined in one unit

CONTROLS

ITEM No	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: CENTRALAB PART No.	REPLACEMENT DATA: CLAROSTAT PART No.	REPLACEMENT DATA: IRC PART No.	REPLACEMENT DATA: MALLORY PART No.	INSTALLATION NOTES
R1A	10000	½	T83Z4	PT-4		T Q1F-586	UR1L	Contrast (Panel) Note 1
B	1Meg	½		R2-51			UR1EL	Volume (Rear) *
C	Switch			KS-1			UR-27	Attach to R1B.
R2A	500KΩ	½	42X394	AS-59	A47-500K-S	Q1J-153	U-50	Brightness-Note 2
B	Shaft		Not Req.	AK-8 *	RS-318 *	NQ	DS-37 *	Attach to R2A.
R3A	1.5Meg	½	42X398	AS-743	A47-1.5MegS	Q1J-156	U-105	Vertical Hold-Note 3
B	Shaft		Not Req.	AK-8 *	RS-318 *	NQ	DS-37 *	Attach to R3A.
R4A	50KΩ	½	42X393	AS-51	A47-50K-S	Q1J-123	U-35	Horizontal Hold-Note 4
B	Shaft		Not Req.	AK-8 *	RS-318 *	NQ	DS-37 *	Attach to R4A.
R5A	1500Ω	½	42X399	AS-5	A47-1500-S	Q1J-109	TAP-153L	Vertical Linearity
B	Shaft		Not Req.	AK-19	RS-1	TQ	Not Req.	Attach to R5A.
R6A	2.5Meg	½	42X396	BX-53	A47-2.5Meg-S	Q1J-339	SU-565	Height
B	Shaft		Not Req.	AK-8 *	RS-318 *	TQ	Not Req.	Attach to R6A.
R7	500Ω	3	42X397		39-500			Buzz (Wire Wound)

Note 1. Part No. 78X23 used in 21" UHF Models-"A" version, and 24" Models.
Note 2. Part No. 42X400 used in 24" Models.
Note 3. Part No. 42X402 used in 24" Models.
Note 4. Part No. 42X401 used in 24" Models.
* Shaft must be filed flat.
+ Universal Replacement (Mallory Exact Duplicate Part No. UE56L).
† Concentrikit Equivalent, K-4 Kit, Base Elements & Shafts; B11-159, P8- 200 (Panel) B11-157, R1-216 (Rear) 78-3 Switch

RESISTORS

ITEM No	RATING: OHMS	RATING: WATT	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: IRC PART No.	NOTES
R8	680KΩ	½	12TAE68M		
R9	470KΩ	½	12TAE472K	BTS-470K	
R10	270KΩ	½	12TAE274K	BTS-270K	
R11	470KΩ	½	12TAE474K	BTS-470K	
R12	10KΩ	½	12TAE103K		
R13	220KΩ	½	12TAE224M		
R14	10KΩ	½	12TAE103K		
R15	560KΩ	½	12TAE563K		
R16	15KΩ	½	12TAE153K		
R17	47KΩ	½	12TAE473K		
R18	1000Ω	½	C81G2	BTA-1000	
R19	2.5Meg	½	B84225	BTS-2.5Meg	
R20	2.1Meg	½	B84225	BTS-2.1Meg	
R21	1000Ω	½	B81G2	BTS-1000	
R22	560KΩ	½	B84563		
R23	47Ω	½	B84471	BTS-470	
R24	470Ω 5%	½	B84470	BTS-47	
R25	5000Ω	4	43X332	PW4-5000	
R26	680KΩ	½	B84683		
R27	470Ω	½	B84471	BTS-470	
R28	470 5%	½	B84470	BTS-47	
R29	47KΩ	½			
R30	22KΩ	½	B84223		
R31	470Ω	½	B84471	BTS-470	
R32	180Ω	½	B84181	BTS-180	
R33	1Meg	½	B84105	BTS-1Meg	
R34	3900Ω	½	B84392	BTS-3900	
R35	1Meg	½	B84105	BTS-1Meg	
R36	3900Ω	½	43X331		
R37	47Ω	½	B84470	BTS-47	
R38	180KΩ	½	B84184	BTS-180K	
R39	15KΩ	½	B85153	BTS-15K	
R40	470KΩ	½	B84474	BTS-470K	
R41	100KΩ	½	B84104	BTS-100K	
R42	100KΩ	½	B84104	BTS-100K	
R43	82KΩ	½	B84823	BTS-82K	
R44	68KΩ	½	B84683	BTS-68K	
R45	680Ω	½	B84681	BTS-680	
R46	330KΩ	½	B84334	BTS-330K	
R47	470KΩ	½	B84474	BTS-470K	
R48	470Ω	½	C81G71	BTA-470	
R49	330Ω	1	C8433L	BTA-330	

Note 1. Some versions use an 82KΩ ½W resistor in this application.
Note 2. Temperature compensating resistor.
Note 3. Used only in models with thermal type circuit breaker.
Note 4. Used only in models not using thermal type circuit breaker.
* Items R58A, R58B, R58C, C59A, C59B, C59C are combined in one unit.

ITEM No	RATING: OHMS	RATING: WATT	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: IRC PART No.	NOTES
R50	22KΩ	½	B84223	BTS-22K	
R51	150KΩ	½	B84154	BTS-150K	
R52	2.2Meg	½	B84225	BTS-2.2Meg	
R53	820KΩ	½	B84824	BTS-820K	
R54	680KΩ	½	B84684	BTS-680K	
R55	47KΩ	½	B84473	BTS-47K	
R56	470Ω	½	B84472	BTS-4700	
R57	680KΩ	½	B84683	BTS-680K	
R58A	22KΩ			BTS-22K	
B	820KΩ		+ TEXT	BTS-820K	
C	820KΩ			BTS-820K	
R59	68KΩ	½	B84684	BTS-680K	
R60	1Meg	½	B84105	BTS-1Meg	
R61	22KΩ	½	B84223	BTS-22K	
R62	820KΩ	½	B84823	BTS-820K	
R63	2.2Meg	½	B84225	BTS- 2.2Meg	
R64	680Ω	½	C8468L	BTA-680	
R65	560Ω	½			
R66	39KΩ	½			
R67	220KΩ	½	B84224		
R68	330KΩ	½	B84334		
R69	330KΩ	½	B84384		
R70	120KΩ	½	B84124		
R71	47KΩ	½	B84473		
R72	82KΩ	½	B84823		
R73	330KΩ	½	B84334		
R74	3900Ω	½	B84392		
R75	33KΩ	½	B84323		
R76	100KΩ	½	B84104		Note 1
R77	1Meg	½	B84105		
R78	68KΩ	½	B84683		
R79	68Ω	½	B85680		
R80	470KΩ	½	B84474		
R81	10KΩ	2	D84103		
R82	10KΩ	2	D84101		
R83	560Ω	½	B84561		
R84	2500Ω	10	43X291	1.5ÅA-2500	
R85	200		43X299		Note 2
R86	25Ω	10	43X280	1.5ÅA-25	
R87	6.5Ω	20	43X283		Note 3
R88	270KΩ	½	B84274	BTS-270K	
R89	7.5Ω	5	43X280		Note 4

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No	USE	REPLACEMENT DATA: CORONADO PART No	Halldorson PART No	Merit PART No	RCA TYPE No	Ram PART No	Stancor PART No	Thordarson PART No	Triad PART No
T1	Vert. Osc. Trans.	54X30	S6702	A-3003	20Q21 ①	V405	A-8125	25A03	A-97X
T2	Horiz. Output Trans.	53X350	PS419 * ①	MVO-38 * ①	125T1 * ①	3094 * ①	A-8253 * ①	F1X-16 * ①	D-50 * ①
T3	Vert. Output Trans.	51X173	21900 ②	A-2823 ②		V302 ②	A-8142 ②	26B72 ②	A-108X ②
T4A B	Yoke(90°) Horiz.(53MH) Vert. (41MH)	8A2373-1 ③ 2A435 ③							

1 Drill new mounting hole(s).
2 Use 8 to 11 turns ratio.
3 Connect as auto transformer.
4 Includes resistors R85 and R86.
5 Yoke rear cover and centering device.

*HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

Use Original Width Coil Unless Replacement Type is Listed

	ORIGINAL TERMINAL (CONNECTIONS)	Halldorson Replacement Connections	Merit Replacement Connections	RCA Replacement Connections	Ram Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
	4	9	9	9	9	8	9	9
	3	7 or 5 Use ④	7 or 5 N C. See Note ④	7 or 5 N C. See Note ④	7 or 5 N C. See Note ④	7 or 5 N C. See Note ④	7 or 5 N C. See Note ④	7 or 5 N C. See Note ④
	2							
	1							
Special Note →		⑥	⑧	⑥	⑧	⑤	⑥	⑧

⑥ Install new damping network consisting of approximately 100MMF ⑦ 2KV, and 10000 Ω ½W, connected in series across terms #3 and #7 of horizontal yoke.

TRANSFORMER (AUDIO OUTPUT)

ITEM No	IMPEDANCE	REPLACEMENT DATA: CORONADO PART No.	Halldorson PART No	Merit PART No	Stancor PART No	Thordarson PART No	Triad PART No	NOTES
	PRI.	SEC.						
T5	3.5KΩ	3-4Ω	81X274	Z1001 ①	A3018 ①	A3869 ①	24S51 ①	B-51X ① ① Drill one new mounting hole.

SPEAKER

ITEM No	RATINGS: SIZE	FIELD	V C. VMP	REPLACEMENT DATA: CORONADO PART No.	QUAM PART No.	RCA TYPE No.	NOTES
SP1	5	PM	3-4Ω	12A577	5A07	20S03	① Used in some versions.
	6	PM	3-4Ω	12A528 ①	6A1	22S01	
	8	PM	3-4Ω	12A532 ①	8A3H	20S05	

COILS (RF-IF)

ITEM No	USE	DC RES. PRI.	DC RES. SEC.	CORONADO PART No.	AERIT PART No.	MILLER PART No.	NOTES
L1	Ant. Matching Trans.	0Ω	0Ω	31TA-413			
L2	Ant. Matching Trans.	0Ω	0Ω	31TA-412			
L3	FM Trap	0Ω		31T-417			
L4	IF Trap Coil	.2Ω		31T-418-01			
L5A	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-302-D	A6SS2M2		Channel 2
B	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-303-D			Channel 3
C	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-304-D			Channel 4
D	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-305-D			Channel 5
E	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-306-D			Channel 6
F	Ant., RF, M Mixer Grid, Osc. Coils	0Ω		31M-307-D			Channel 7
G	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-308-D			Channel 8
H	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-309-D			Channel 9
I	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-310-D			Channel 10
J	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-311-D			Channel 11
K	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-312-D			Channel 12
L	Ant., RF, Mixer Grid, Osc. Coils	0Ω		31M-313-D			Channel 13
L6	Fil. Choke	0Ω		34A-732			
L7	Neut. Coil	0Ω		31B-727			
L8	RF Coil	0Ω		25A-154-01			
L9	RF Coil	0Ω					
L10	Choke, Plate	.1Ω		31UA-505			
L11	3SMC Trap	.1Ω		9A3209		T5-153	6235
L12	1st Video IF	.1Ω		9A3286		T5-151	6235
L13	2nd Video IF	.2Ω	.2Ω	9A3283			6233
L14	3rd Video IF	.2Ω	.2Ω	9A3284			6231
L15	Series Peaking Coil	5Ω		9A3275	T5-1038	T5-150	8176	Includes 47.25MC Trap Includes 41.25MC Trap 8239 and 8245
L16	Shunt Peaking Coil	12.5Ω		38A12	T5-1180	T5-154 *	8130 *	180 Microhenries, Wound on 5.6KΩ resistor
L17	4.5MC Trap	2.3Ω		9A3268	30-1004	T5-151	1469	
L18	Series Peaking Coil	21Ω		38A38	T5-1400 ▲	T5-150 ▲	6132 ▲	330 Microhenries, Wound on 6.8KΩ resistor

CORONADO MODELS TV2-9325A, B, TV2L-9325A, TV2-9326A, B, TV2L-9326A, TV2-9327A, B, TV2L-9327A, TV2-9328A, B, TV2L-9328A

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (cont)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA: CORONADO PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L19	Shunt Peaking Coil	16Ω		36A33	19-3250 ▲	TV-185 ▲	6181 ▲	225 Microhenries, Wound on 2.2KΩ resistor
L20	1st Sound IF	3.2Ω		9A2366	20-1004	TV-151	1469	
L21	2nd Sound IF	3.6Ω	3.6Ω	9A2368	17-3495	TV-113	6203	
L22	Quadrature Coil	5.8Ω		9A2367	20-1005		1480	
L23	RF Choke	.1Ω		9A2380	19-1001		4604	1.5 Microhenries

* Parallel with 22KΩ resistor.
● Parallel with 6.8KΩ resistor.
▲ Parallel with 2.2KΩ resistor.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA: CORONADO PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.	Thordarson PART No.	NOTES
L24	77Ω		9A2372			6211 ■				Tapped @ 53Ω- Horiz. Osc.
L25	60Ω		9A2371							Horiz. Waveform

■ Enlarge mounting hole.

FILTER CHOKE

ITEM No.	RATINGS: TOTAL DIRECT CURRENT	RATINGS: D.C. RESISTANCE	RATINGS: INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA: CORONADO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L26	.255A	41Ω	1HY	52X95-2	C5037 ①	C2996 ①	C2326 ①	26C41	C-17X ①

① Drill one new mounting hole.

SELENIUM RECTIFIER

ITEM No.	RATING: CURRENT	REPLACEMENT DATA: CORONADO PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	NOTES
M1	.255ADC	66X14	1236A	MR300	6S300	6Q4	300	
M2	.255ADC	66X14	1236A	MR300	6S300	6Q4	300	

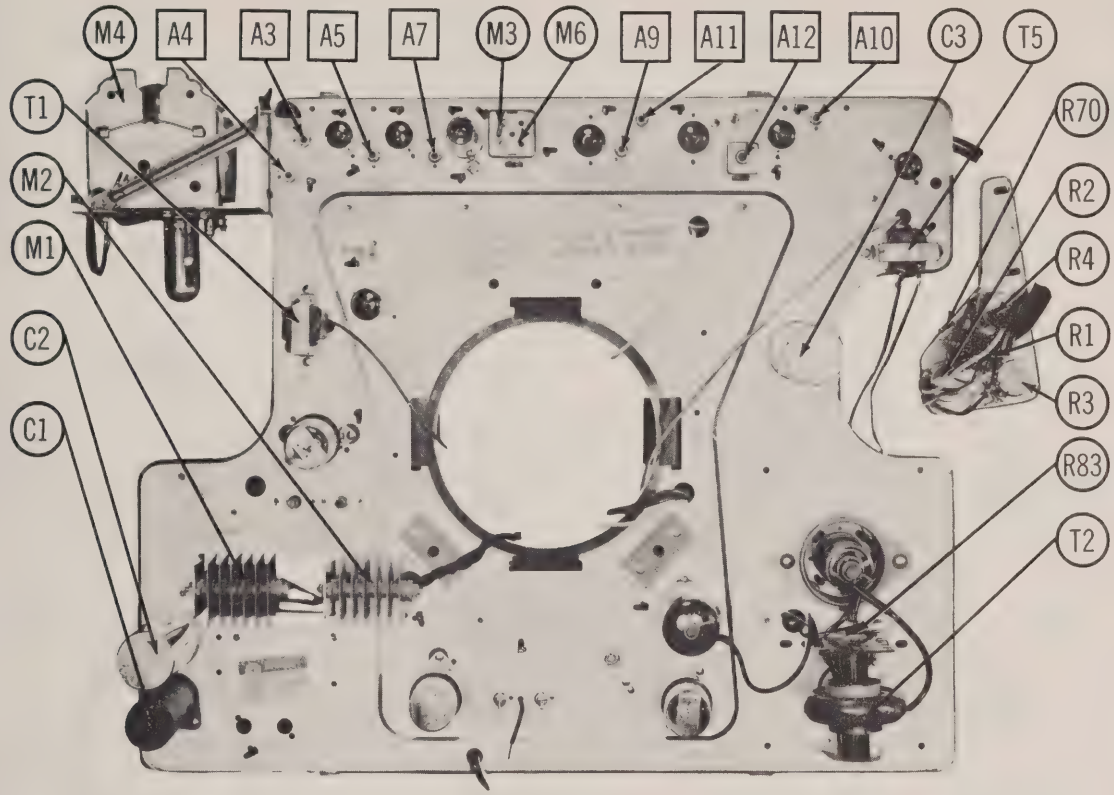
CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA: CORONADO PART No.	REPLACEMENT DATA: SYLVANIA PART No.	NOTES
M3	1N295 *		1N60	Video Det. (Pigtail)

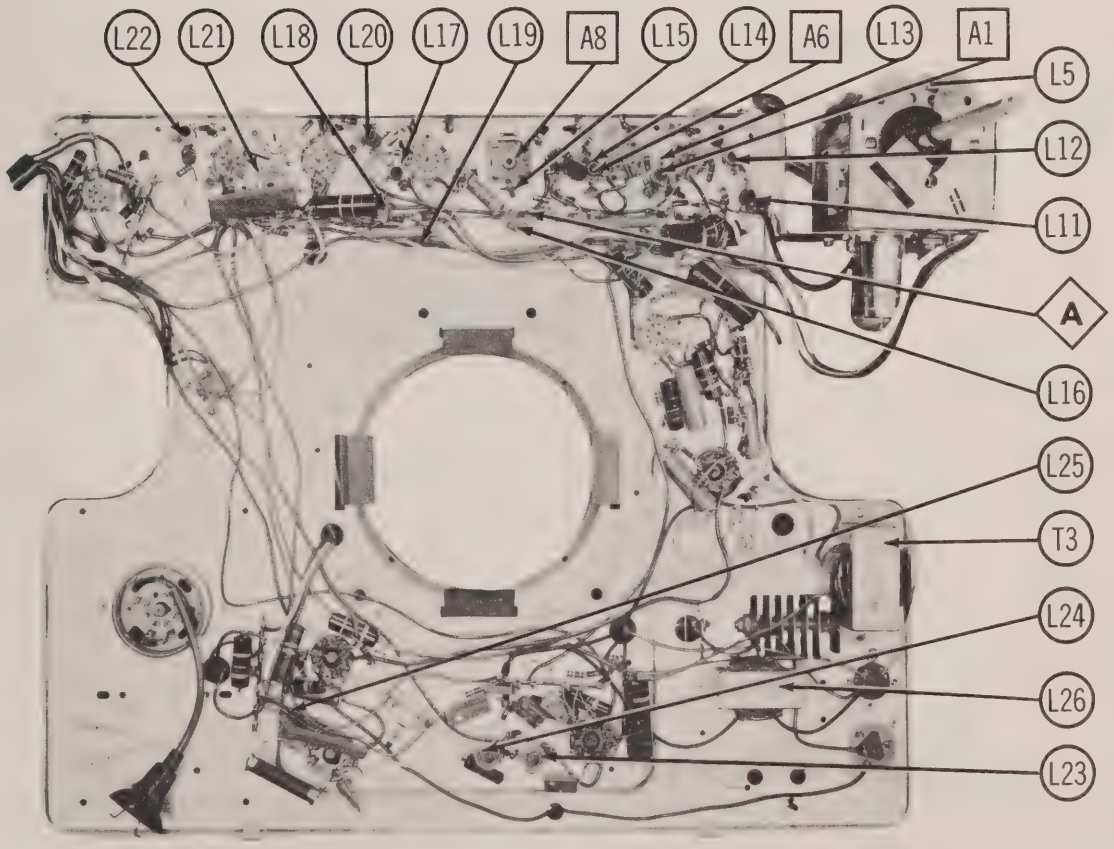
* Some versions may use crystal diode type CK706 or 1N60 in this application.

MISCELLANEOUS

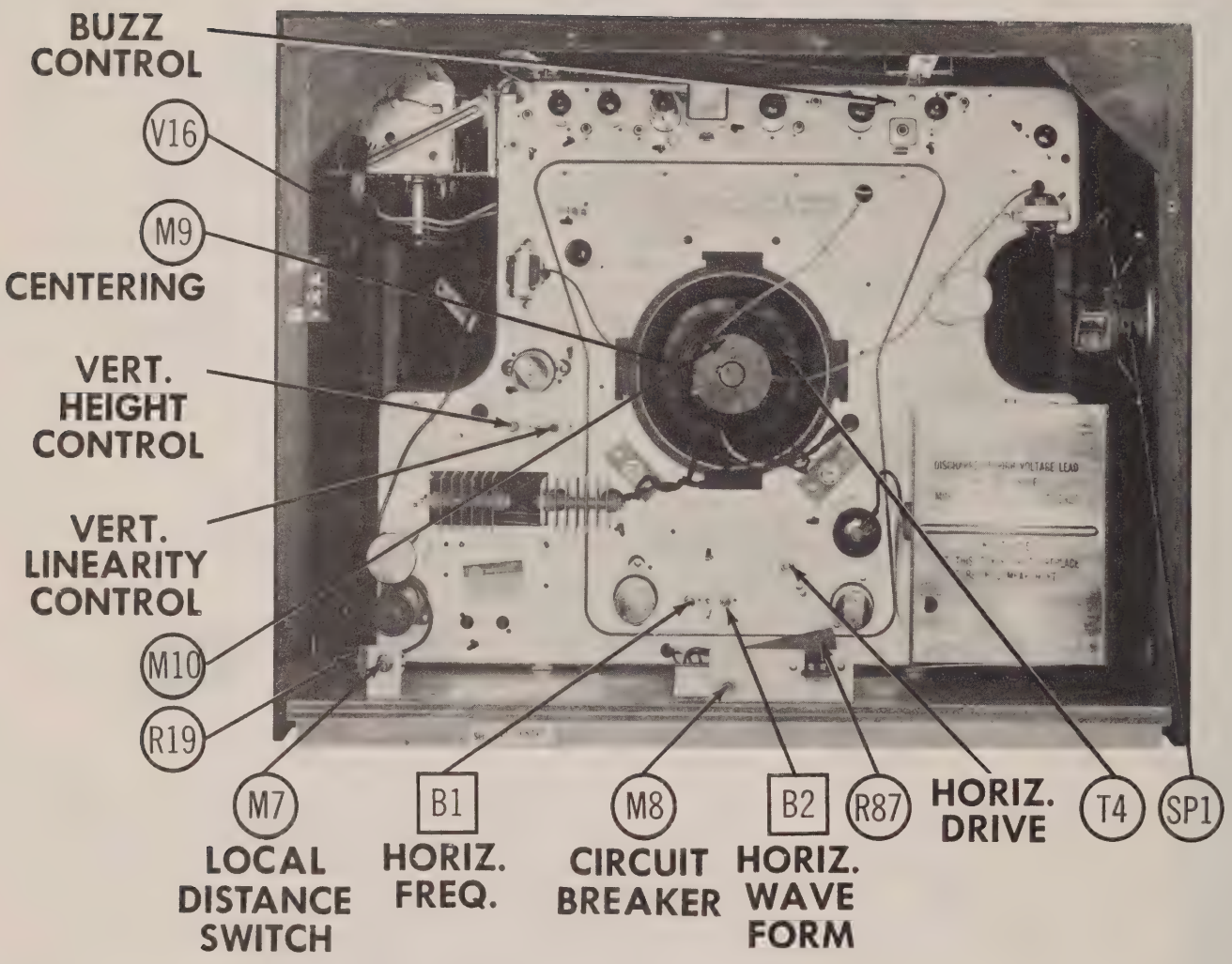
ITEM No.	PART NAME	CORONADO PART No.	NOTES
M4	Tuner	25A1133	VHF; VHF Models
M5	Tuner	25A1134	VHF-UHF; VHF-UHF Models
	Tuner	25A1138	VHF-UHF; VHF-UHF
M6	Video Det. Assy.	9A2370	Includes M3, coils and capacitors
M7	Switch	2A459	Local-suburban-fringe (SP-3 position, rotary, wafer type)
M8	Circuit Breaker	2A461	Thermal Type-Used in later versions.
M9	Centering Device	2A435	Includes deflection yoke (T4) rear cover
M10	Ion Trap	2A421	
B3	Trimmer Cap.	17A271	Horiz. Drive (170-700MMF)



CHASSIS TOP VIEW



CHASSIS BOTTOM VIEW-TRANS., INDUCTOR AND ALIGNMENT IDENT.



CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern. Set the contrast control for normal contrast.

1. Set the horizontal hold control to its mid-range position and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

2. Connect the vertical amplifier of an oscilloscope to the junction of L23 and L24 thru a 10MMF capacitor. Connect the low side to chassis. Adjust the horizontal waveform slug (B2) until waveform similar to Fig. 6 is obtained. While making this adjustment keep the picture in sync with the horizontal hold control.

3. Turn the horizontal hold control fully clockwise. Turn B1 clockwise until picture is just ready to pull-in sync.

4. Turn the horizontal hold control fully counter clockwise. Picture should remain in sync. Momentarily remove the signal by switching off the channel and back again. Retouch B1 if necessary.

5. While receiving a signal from a station, turn the contrast control fully counter clockwise, turn the brightness up so that the picture is washed out in appearance. Turn the horizontal drive control (B3) clockwise until white vertical bars appear in the left center of the raster, then slowly turn B3 counter clockwise until the white bars just disappear.

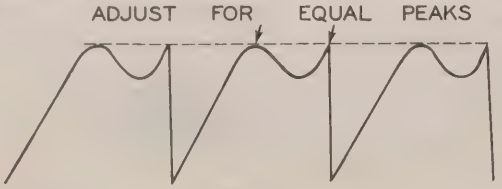


FIG. 6

PHOTOFACT* Folder

*TRADE MARK

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)

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CROSLEY MODEL J-21TAWH

TRADE NAME	Crosley	MODEL	CHASSIS
		J-21CABH, J-21CAMH, J-21TABH, J-21TAMH, J-21TAWH, J-21RABH, J-21RAMH	483
		J-21CABU, J-21CAMU, J-21TABU, J-21TAMU, J-21TAWU, J-21RABU, J-21RAMU	484
MANUFACTURER	Crosley Corporation, 1329 Arlington St., Cincinnati, Ohio		
TYPE SET	Television Receiver		
TUBES	Fifteen		
POWER SUPPLY	110-120 Volts AC-60 Cycle	RATING 1.22 Amp. @ 117 Volts AC	
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 26.4MC, Sound IF 21.9MC (Intercarrier) UHF Converter Output Channels 5 or 6.		

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CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)

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*TRADE MARK

PF
L. F
3
DE
COLORADO

DISASSEMBLY INSTRUCTIONS

CABINET REMOVAL - TABLE MODELS

1. Remove 6 push-on type control knobs from side panel of cabinet.

2. Remove 6 wood screws and 1 metal screws. Remove rear cover.

3. Remove 1 wood screw holding antenna terminal bracket.

4. Remove 2 wood screws on the inside rear corner braces that hold the cabinet to the cabinet base.

5. Remove 2 wood screws holding chassis to wood strip on the inside top of cabinet.

6. Remove 6 bolts and lockwashers on the under side of the cabinet base (along the edges of cabinet base), also 1 wood screw at the bottom front of cabinet.

7. Lift cabinet from cabinet base.

8. Remove 2 speaker nuts. Remove speaker.

CHASSIS REMOVAL - CONSOLE MODELS

1. Perform steps 1, 2 and 3 as outlined above.

2. Remove 2 wood screws holding chassis to wood strip on the inside top of cabinet.

3. Remove the hex head screws from the under side of the cabinet rails.

4. Slide the chassis with mounting board from cabinet.

5. Remove 2 speaker nuts. Remove speaker.

MODEL	CHASSIS
J-21TAWH	483

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the VHF tuner oscillator circuit may be accomplished by removing the channel selector and fine tuning knobs.

PICTURE TUBE SAFETY GLASS CLEANING

Remove 3 wood screws holding wooden molding at bottom edge of the safety glass. Remove molding and safety glass. Use extreme caution when removing safety glass.

SERVICE ADJUSTMENT LOCATION

See tube placement chart on page 5.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Remove rear cover and supply power to chassis. Set horizontal hold control at mid-range position and adjust horizontal frequency slug (B2) until the picture synchronizes horizontally.

SOUND IF DETECTOR BUZZ ADJUSTMENT

Adjust buzz control (R9) for maximum volume and minimum buzz.

CENTERING

Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube, located flush against the deflection yoke. Rotate the two rings around the neck of the tube until the picture is properly centered.

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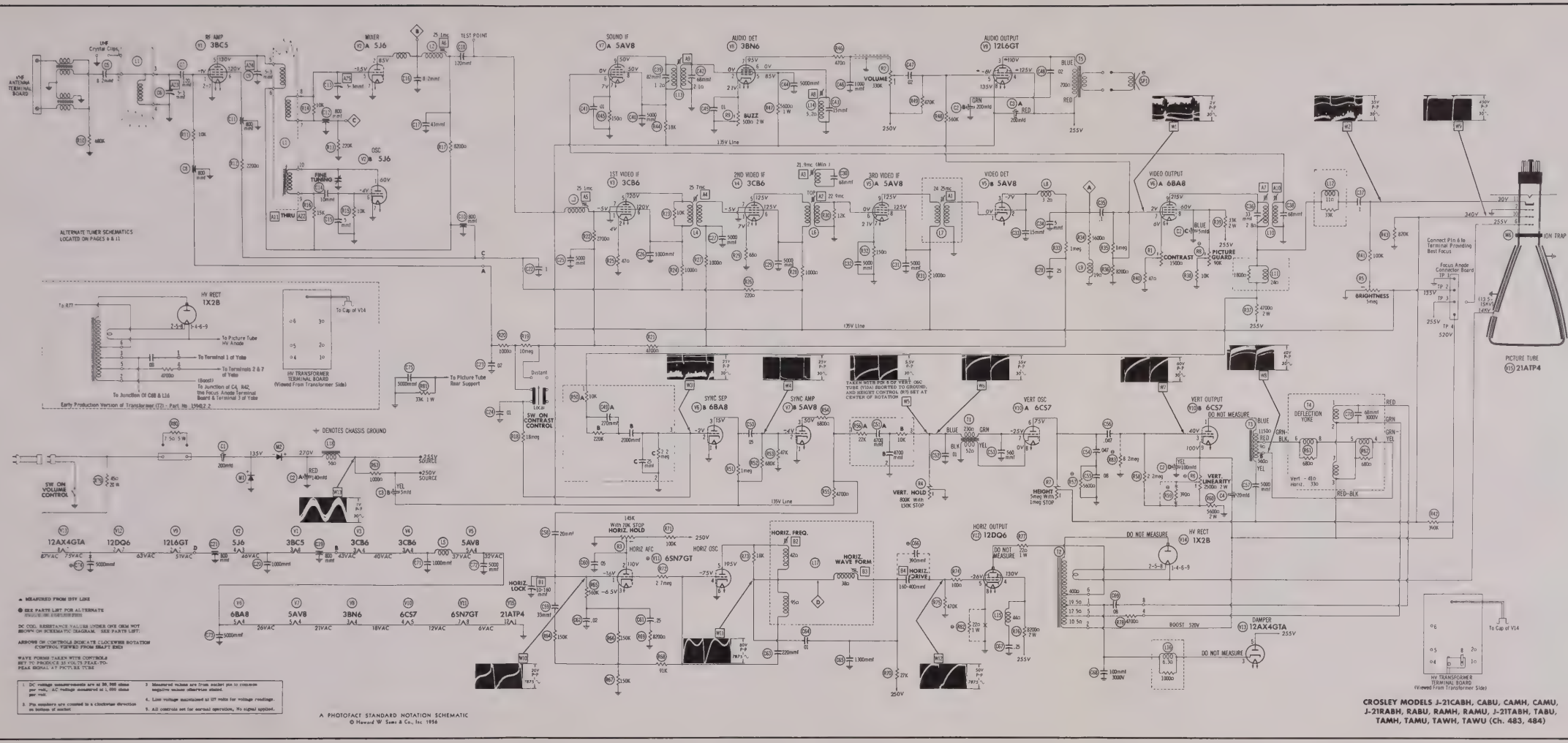
RF AMP 3BC5
MIXER 5J6
OSC 5J6
SOUND IF 5AV8
AUDIO DET 3BN6
AUDIO OUTPUT 12L6GT
1ST VIDEO IF 3CB6
2ND VIDEO IF 3CB6
3RD VIDEO IF 5AV8
VIDEO DET 5AV8
VIDEO OUTPUT 6BA8
SYNC SEP 6BA8
SYNC AMP 5AV8
VERT OSC 6C57
VERT OUTPUT 6C57
HORIZ OSC 6SN7GT
HORIZ OUTPUT 12DQ6
DAMPER 12AX4GTA
HV RECT 1X2B
PICTURE TUBE 21ATP4
135V Line
ALTERNATE TUNER SCHEMATICS LOCATED ON PAGES 8 & 11
DENOTES CHASSIS GROUND
A MEASURED FROM 135V LINE
SEE PARTS LIST FOR ALTERNATE SINGLE OR DUAL RESISTORS
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM. SEE PARTS LIST.
ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION CONTROL VIEWED FROM SHAFT END
WAVE FORMS TAKEN WITH CONTROLS SET TO PRODUCE 25 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE
1. DC voltage measurements are at 20,000 ohms per volt, AC voltage measured at 1,000 ohms per volt.
2. Pin numbers are counted in a clockwise direction as bottom of socket
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation, No signal applied.
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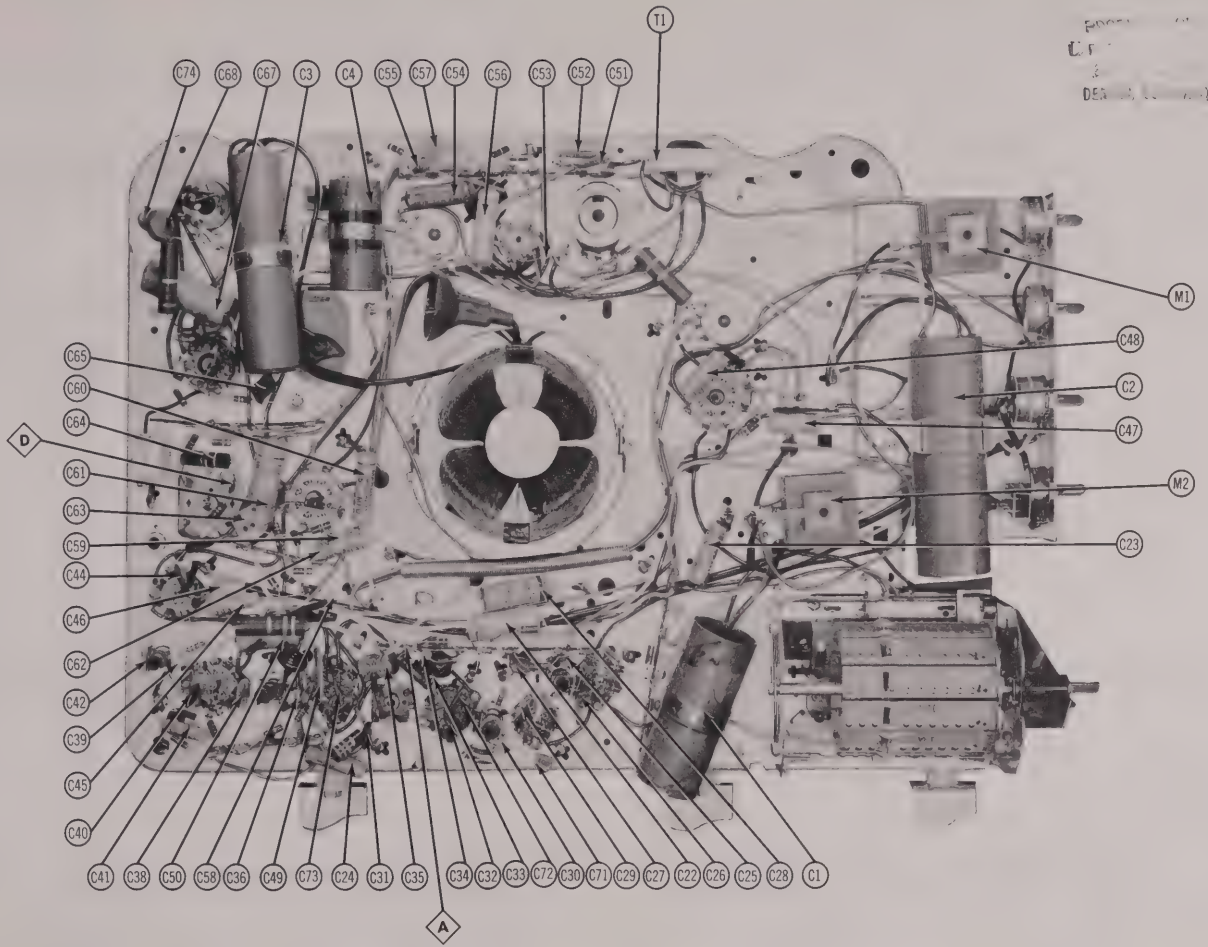
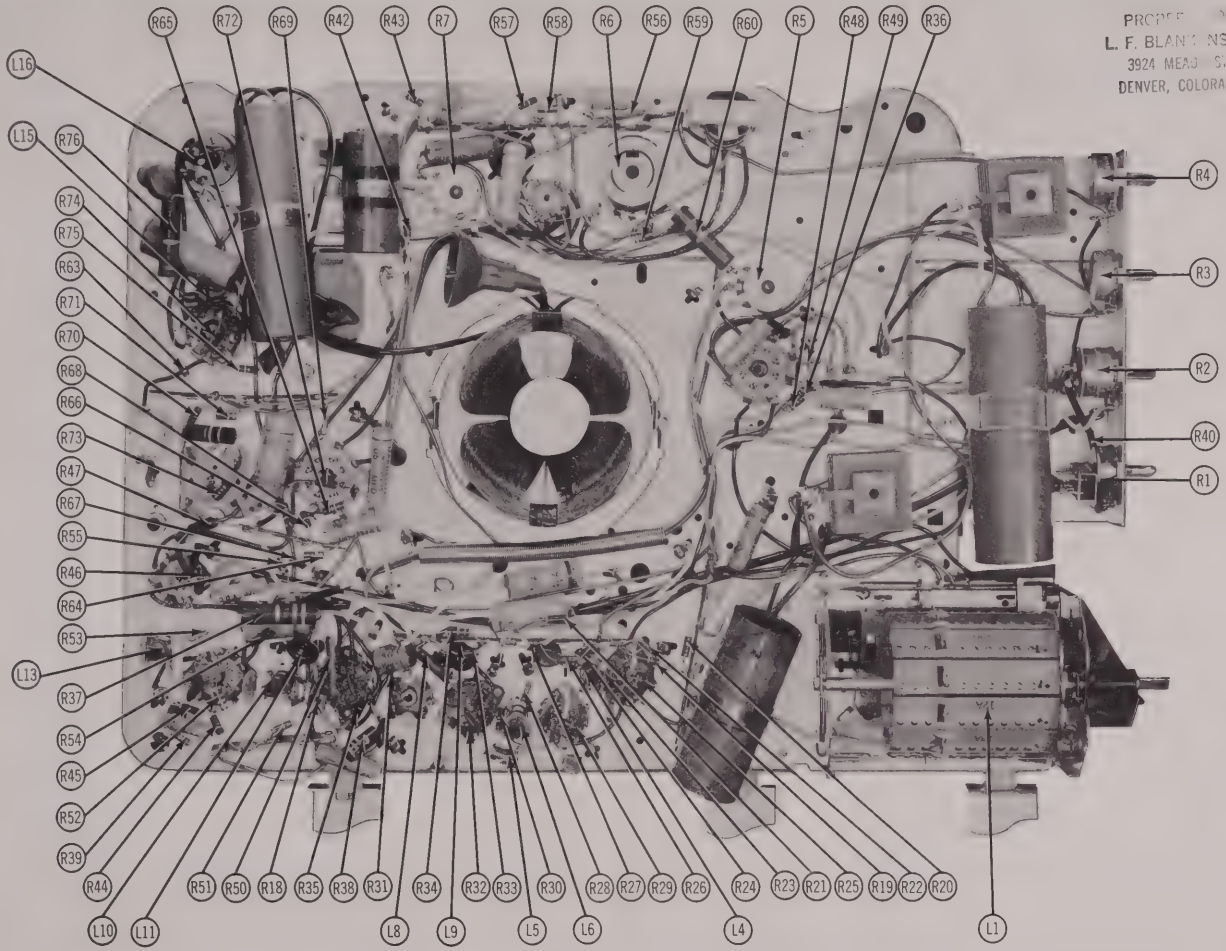
CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)



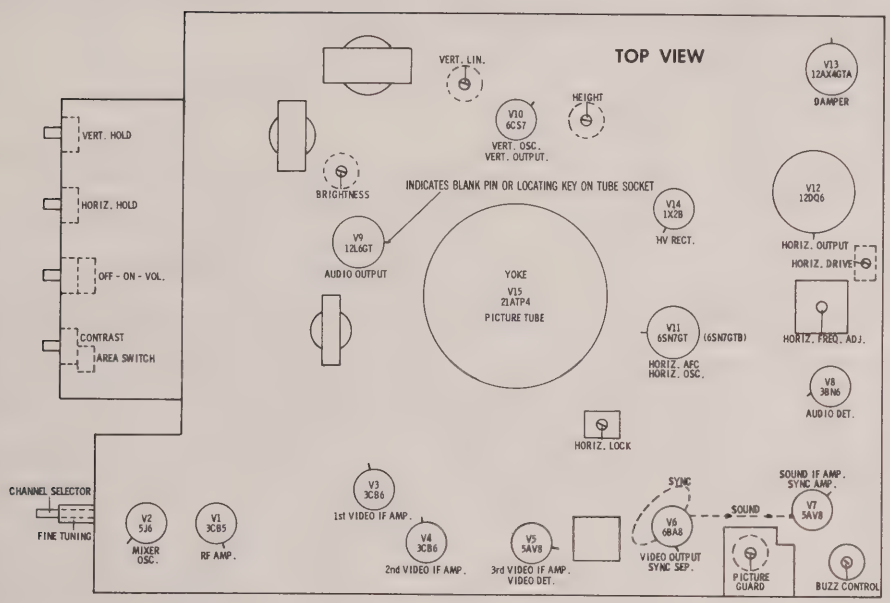
CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (CH. 483, 484)

TUBE PLACEMENT CHART

PROPERTY OF
L. F. B[illegible]NSHIP
3924 MEA[illegible]
[illegible]OWER, [illegible]



TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce the indicated symptoms. Refer to tube placement chart for location and type of tube.

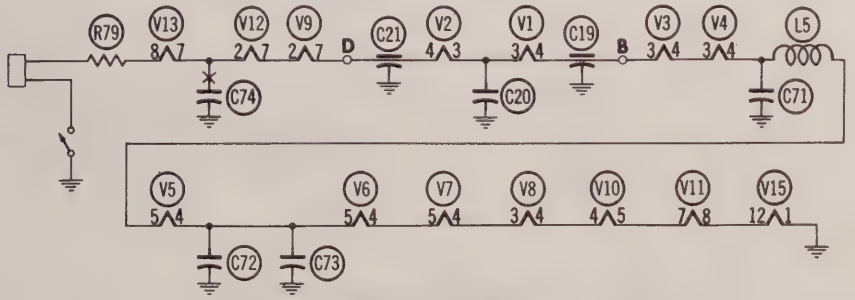
POWER SUPPLY FAILURE
No raster, no sound - **Selenium Rectifiers (M1 & M2)**

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - **V2, V3, V4, V5, V6, V9**
No pic, no sound, has snow - **V1, V2, V3**
No pic, has sound, has raster - **V6, V15**
Has pic, no sound - **V7, V8, V9**

SYNC FAILURE
No vert. sync - **V7, V10**
No horiz. sync - **V7, V11**
No vert. or horiz. sync - **V6, V7**

SWEEP FAILURE
No raster, has sound - **V11, V12, V13, V14, V15**
No vertical deflection - **V10**
Poor vert. linearity or foldover - **V10**
Poor horiz. linearity or foldover - **V11, V12, V13**
Narrow picture - **V11, V12, V13, V14, M1, M2**
Vert. off freq. - **V7, V10**
Horiz. off freq. - **V7, V11**

NOTE: Since this receiver employs tubes used in a series filament network, an open filament in any tube in any tube in series will cause the set to be inoperative (See circuit below).



SET 336 FOLDER 3

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use an isolation transformer to protect the test equipment.
The high voltage lead should be securely taped away from the chassis. Do not remove the horizontal oscillator tube (V11) to disable the high voltage.

VIDEO IF ALIGNMENT

Turn contrast control to the minimum position. Connect the negative lead of a 3 volt bias supply to the ungrounded side of C28. Connect the positive lead to chassis. Attenuate generator output to maintain not more than 2 volts on the VTVM.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	.01MFD	High side to point Ⓑ. Low side to tuner case.	24.25MC	Any non-interfering channel.	DC probe thru 10K to point Ⓐ. Common to chassis.	A1	Adjust for maximum deflection.
2.	"	"	22.9MC	"	"	A2	Adjust for maximum deflection. If two peaks occur, use peak with slug nearest chassis.
3.	"	"	21.9MC	"	"	A3	Increase generator output and adjust A3 for MINIMUM deflection. Use null with slug farthest from chassis. Repeat steps 2 and 3.
4.	"	"	25.7MC	"	"	A4	Adjust for maximum deflection.
5.	"	"	25.1MC	"	"	A5	Adjust for maximum deflection. If two peaks occur, use peak with slug nearest chassis.
6.	"	High side to point Ⓒ. Low side to chassis.	25.1MC	"	"	A6	Connect a 100Ω resistor in series with a 1000MMF capacitor across L3. Adjust L6 for maximum deflection.

OVERALL VIDEO IF RESPONSE CHECK

Leave bias connected as under "Video IF Alignment".
Use only enough sweep generator output to provide usable pattern on scope.
If it is necessary to disable the local oscillator tube to reduce the possibility of erroneous indications, remove the converter tube and replace with a 5J6 which has pin 1 removed.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

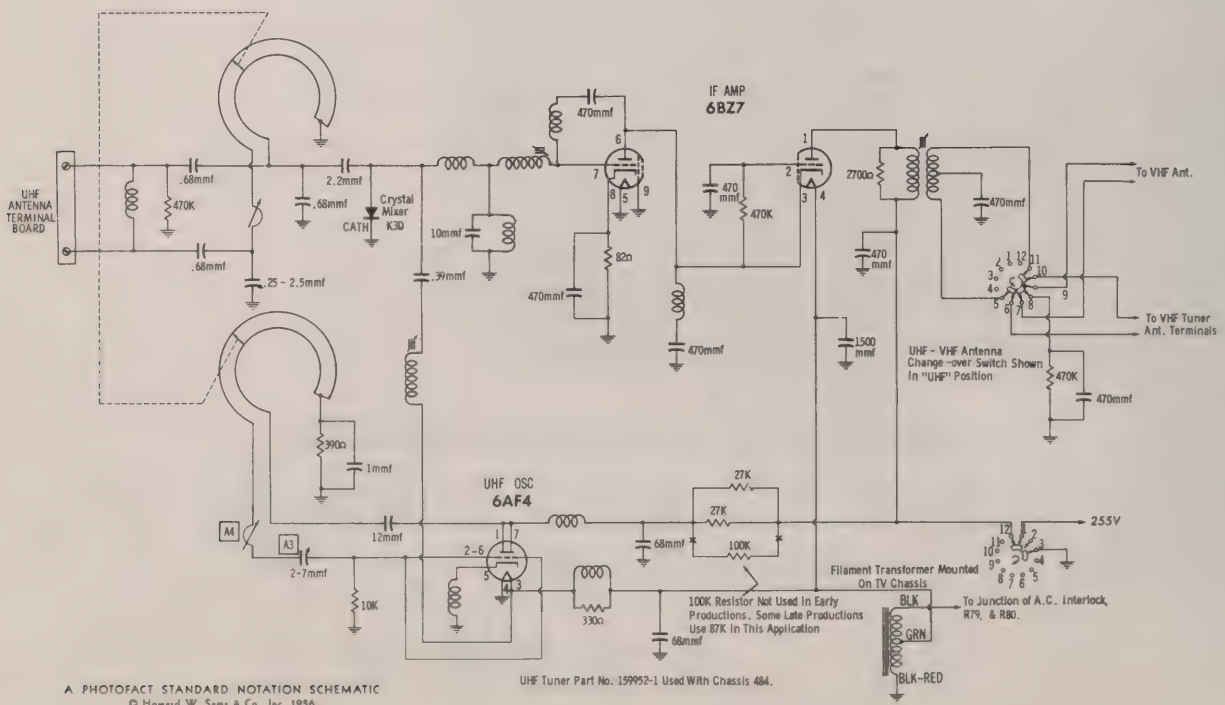
	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
7.	Direct	High side to floating tube shield over converter tube. Low side to chassis	25.0MC	21.9MC 22.9MC 24.25MC 25.1MC 25.7MC 26.4MC 27.9MC	Any non-interfering channel.	Vert. amp. thru 10K to point Ⓐ. Low side to chassis.		Check for response similar to Fig. 1. If necessary, SLIGHTLY retouch A1, A2, A4, A5 and A6 for desired response. Adjust A3 so that 21.9MC marker falls in trap notch. Replace original 5J6 in its socket.

4.5MC TRAP ALIGNMENT

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	Direct	High side to point Ⓐ. Low side to chassis.	Not Used.	4.5MC (400∿ Mod)	Any	Vert. amp. thru detector (Fig. 2) to pin 11 (cathode of picture tube). Low side to chassis.	A7	Adjust for MINIMUM 400∿ indication on scope.

SOUND IF ALIGNMENT USING ON THE AIR SIGNAL

Turn the set on and tune in a strong TV signal. Turn the buzz control (R9) 90° from maximum clockwise rotation. Adjust A8 for maximum volume. Reduce the signal strength into the receiver by inserting an attenuator in series with the antenna and the receiver antenna terminals. If a suitable attenuator is not available, remove the antenna from the antenna terminals and stray feed the signal into the receiver by placing the antenna near the antenna terminals. Adjust A9 and A10 for maximum volume. Adjust R9 for minimum noise. Reconnect antenna and readjust A8 for maximum volume. If necessary, reduce the volume so this peak can be heard.



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UHF Tuner Part No. 159952-1 Used With Chassis 484.

UHF TUNER SCHEMATIC

L. I. B. INKMASTER
DENVER, COLORADO

ALIGNMENT INSTRUCTIONS (cont)

ALTERNATE SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Set the volume control at a low level.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9.	Direct	High side to point (A). Low side to chassis.	4.5MC (7.5KC Swp)	4.5MC (400∿ FM Mod)	Any non-interfering channel.	Across secondary of audio output trans.	A8	Set buzz control (R9) 90° from maximum clockwise rotation. Adjust A8 for maximum 400∿ indication on scope.
10.	"	"	"	"	"	"	A9, A10	Attenuate signal generator so that signal level is below the limiting level of the 3BN6 as evidenced by background hiss and noise. Adjust A9 and A10 for maximum response on scope.
11.	"	"	Not Used.	4.5MC (400∿ AM Mod.)	"	"	R9	Use high signal generator output and adjust R9 for MINIMUM 400∿ indication on scope.
12.	"	"	4.5MC (7.5KC Swp)	4.5MC (400∿ FM Mod.)	"	"	A8	With volume control at low level, retouch A8 for maximum 400∿ indication on scope.

OSCILLATOR ALIGNMENT

Leave bias connected as under "Video IF Alignment". If a dummy converter tube was used, replace with the original 5J6. The channel oscillator adjustment screws are reached through a hole just above the channel switch shaft. The correct adjustment screw is accessible through this hole as the channel switch is turned to each channel.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the fine tuning control to the mid-position of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	57MC (10MC Swp)	55.25MC 59.75MC	2	Vert. amp. thru 10K to point (A). Low side to chassis.	A11	Adjust to place sound marker in trap notch as in Fig. 3. Video marker should fall at 40%.
			63MC (10MC Swp)	61.25MC 65.75MC	3		A12	
			69MC (10MC Swp)	67.25MC 71.75MC	4		A13	
			79MC (10MC Swp)	77.25MC 81.75MC	5		A14	
			85MC (10MC Swp)	83.25MC 87.75MC	6		A15	
			177MC (10MC Swp)	175.25MC 179.75MC	7		A16	
			183MC (10MC Swp)	181.25MC 185.75MC	8		A17	
			189MC (10MC Swp)	187.25MC 191.75MC	9		A18	
			195MC (10MC Swp)	193.25MC 197.75MC	10		A19	
			201MC (10MC Swp)	199.25MC 203.75MC	11		A20	
			207MC (10MC Swp)	205.25MC 209.75MC	12		A21	
			213MC (10MC Swp)	211.25MC 215.75MC	13		A22	

RF AND MIXER ALIGNMENT

Connect the negative lead of a 2.5 volt bias supply to the AGC line (white wire from the tuner).
Connect the positive lead to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
14.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	195MC (10MC Swp)	193.25MC 197.75MC	10	Vert. amp. thru 10K to point (C). Low side to chassis.	A23, A24, A25	Adjust for response curve similar to Fig. 4 with markers above 90%.
15.	"	"	213MC (10MC Swp)	211.25MC 215.75MC	13	"		If markers fall below 70% on any channel, make compromise adjustments of A23, A24 and A25 with channel switch set to that channel. Recheck all other channels to see that they have not been seriously affected.
			207MC (10MC Swp)	205.25MC 209.75MC	12			
			201MC (10MC Swp)	199.25MC 203.75MC	11			
			189MC (10MC Swp)	187.25MC 191.75MC	9			
			183MC (10MC Swp)	181.25MC 185.75MC	8			
			177MC (10MC Swp)	175.25MC 179.75MC	7			
			85MC (10MC Swp)	83.25MC 87.75MC	6			
			79MC (10MC Swp)	77.25MC 81.75MC	5			
			69MC (10MC Swp)	67.25MC 71.75MC	4			
			63MC (10MC Swp)	61.25MC 65.75MC	3			
			57MC (10MC Swp)	55.25MC 59.75MC	2			

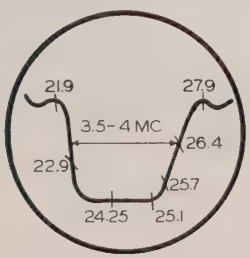


FIG. 1

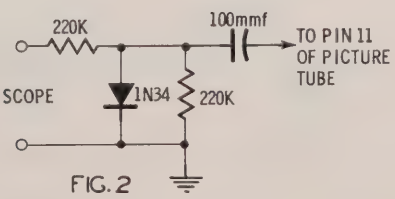


FIG. 2

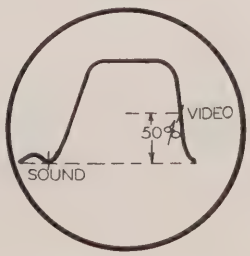


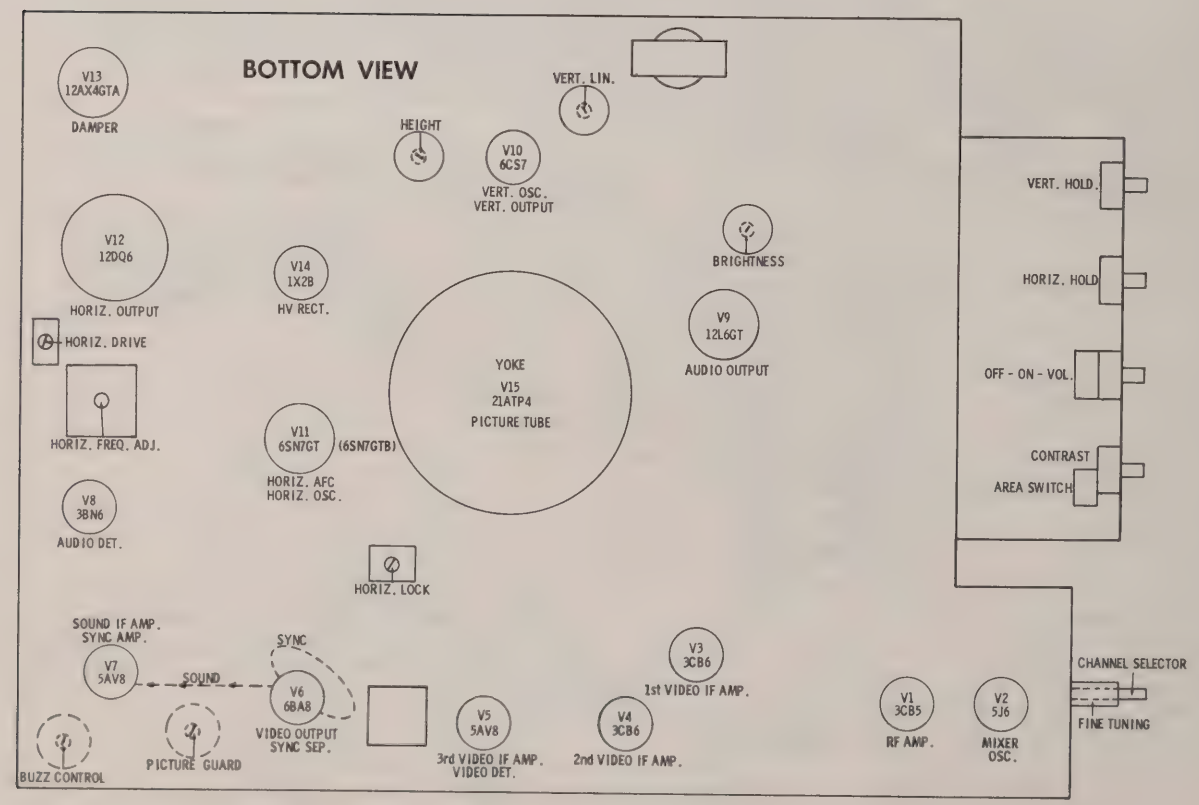
FIG. 3

FIG. 4

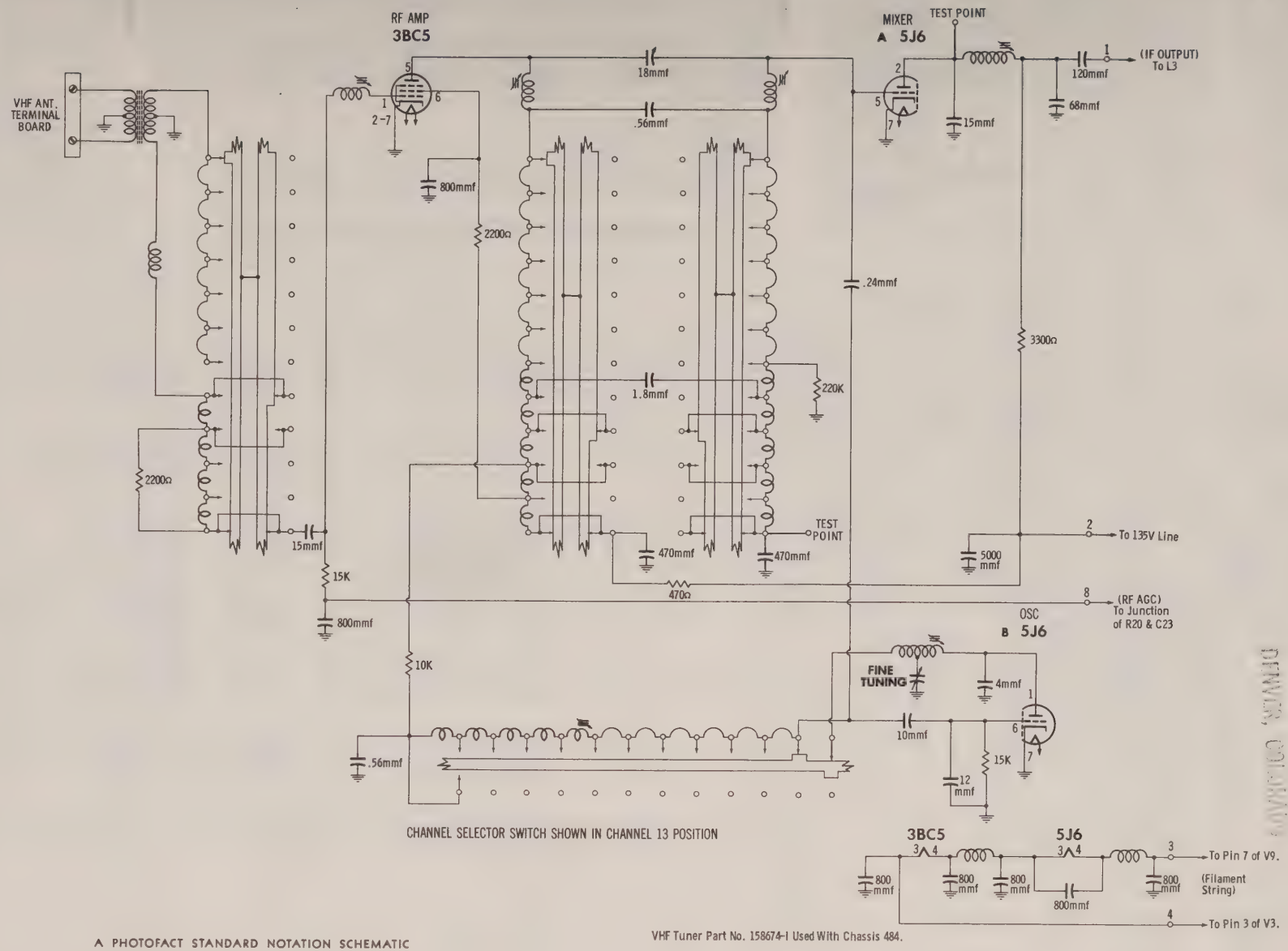
RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	3BC5	7Meg	0Ω	12Ω	11Ω	■ 220Ω	■ 2400Ω	0Ω		
V2	5J6	■ 15K	■ 8400Ω	12Ω	13Ω	220K	10K	0Ω		
V3	3CB6	1Meg	47Ω	11Ω	10Ω	■ 1200Ω	■ 1200Ω	0Ω		
V4	3CB6	1Meg	68Ω	10Ω	9Ω	■ 1000Ω	■ 1000Ω	0Ω		
V5	5AV8	.4Ω	5600Ω	5600Ω	8Ω	9Ω	.4Ω	150Ω	■ 1000Ω	■ 1000Ω
V6	6BA8	0Ω	2Meg	■ 1Meg	7Ω	8Ω	● 55Ω	1Meg	● † 25K	† 4700Ω
V7	5AV8	0Ω	47K	■ 12K	6Ω	7Ω	.9Ω	150Ω	■ 18K	■ 18K
V8	3BN6	● 220Ω	2.1Ω	6Ω	5Ω	■ 5600Ω	5.2Ω	† 330K		
V9	12L6GT	NC	15Ω	† 255Ω	† 56Ω	250K	TP	13Ω	90K	
V10	6CS7	▲ 1100Ω	NC	2.2Meg	5Ω	3Ω	●▲ 2.5meg	● 400K	52Ω	● 7500Ω
V11	6SN7GT	700K	† 70K	300K	250K	† 28K	0Ω	3Ω	2Ω	
V12	12DQ6	TP	17Ω	TP	† 8200Ω	470K	TP	15Ω	0Ω	TOP CAP ▲ 42Ω
V13	12AX4GTA	NC	NC	650K	NC	† 56Ω	TP	17Ω	20Ω	
V14	1X2B			PINS	1 - 8	HAVE	INFINITE	RESISTANCE		TOP CAP ▲ 420Ω
V15	21ATP4	0Ω	0Ω	PIN 6 † 56Ω	PIN 10 ▲ 350K	PIN 11 ●■ 250K	PIN 12 2Ω			

■ MEASURED FROM 135V LINE.
● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
† MEASURED FROM OUTPUT OF M2.
▲ MEASURED FROM PIN 3 OF V13.
TP TIE POINT
NC NO CONNECTION



TUBE PLACEMENT CHART



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ALTERNATE VHF TUNER SCHEMATIC

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU, J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (Ch. 483, 484)

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amp.	3BC5	
V2	Mixer-Osc.	5J6	
V3	1st Video IF Amp.	3CB6	
V4	2nd Video IF Amp.	3CB6	
V5	3rd Video IF Amp. - Video Det.	5AV8	
V6	Video Output - Sync Sep.	6BA8	

Note 1: Type 6BH7GTB may be used in some versions.

ITEM No.	USE	TYPE	NOTES
V7	Sound IF Amp. -Sync Amp.	5AV8	
V8	Audio Det.	3BN6	
V9	Audio Output	12AU7	
V10	Vert. Osc. -Vert. Output	6C8T	
V11	Horiz. AFC-Horiz. Osc.	6BH7GT	Note 1
V12	Horiz. Output	12DQ8	
V13	Damper	12AX4GTA	
V14	HV Rectifier	1B3B	

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	CROSLEY Part No.	CBS Part No	GENERAL ELECTRIC Part No.	SYLVANIA Part No.	
V15	21ATP4 ①	21ATP4 ①	21ATP4 ①	21ATP4 21ATP4A ②	① Aluminized ② Silver Screen "25"

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA CROSLEY Part No.	AEROVOX Part No.	CORNELL-DUBILIER Part No.	MALLORY Part No.	PYRAMID Part No.	SANGAMO Part No.	SPRAGUE Part No.
C1	300	300	185857-1	PRL-675	EE10606	WS343	TD-300-300	D-100	R1648
C3A	140	250	185960-3	PRH-875	EE10439	WT648	CDM300H3	D-103	S2506*
B	300	300				TCD49	TD-80-250	S-230	
C	5	300							
D	100	150							
C3A	300	300	185917-1	PRH-375	EE10606	WD345		D-100	R3063*
B	5	300			BR835			MT-5504	
C4	30	600	185869-1	PRH800V30	BR2060	TC53	TD-30-500	H-315	TVA-1906

* Not catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	VOLT	REPLACEMENT DATA CROSLEY Part No.	AEROVOX Part No.	CENTRALAB Part No.	CORNELL-DUBILIER Part No.	ERIE Part No.	MALLORY Part No.	SPRAGUE Part No.	NOTES
C5	5.2		156106-18	NPO-DB. 2		2016	NPOA-SR2			
C6	.5-3		156906-5		830-3		3115-01-0R5	CT565A		
C7	130		156906-15	DI-00013	ED-1321	GD44	811-131	UC-5313	5GA-713	
C8	900									
C9	.5-3		156906-5		830-3		3115-01-0R5	CT565A		
C10	800									
C11	600									
C12	500									
C13	.5-3		156906-5		830-3		3115-01-0R5	CT565A		
C14	10		156906-13	N750-DI0	TCN-10	N018	N750A-100	MT-541	5TCU-Q5	
C15	5		156906-10							
C16	5.2		156106-18	NPO-DB. 2		2016	NPOA-SR2			
C17	43		156106-16		TCE-43	2033	NPO1-430			
C18	130		156906-15	DI-00013	ED-1321	GD44	811-131	UC-5313	5GA-713	
C19	900									
C20	1000		185815-5	BPD-001	ED-103	KD69	801-001	DC531	5HK-D1	
C21	820									
C22	.1	400	194787-47	P488N-1	DF-104	CUB4P1		PT401	47M-P1	
C23	.05	300	39001-80	BPD-03	DF-303	CUB4S3	817-03	PT413	37M-S3	
C24	.01	300	39476-41	BPD-01	DE-103	CUB4S1	GP3-333-103	PT411	47M-S1	
C25	6000		144675-3	BPD-006	ED-603	KD60	811-006	DC535	5HK-D6	
C26	1000		144675-14	BPD-001	ED-103	KD69	801-001	DC531	5HK-D1	
C27	5000		144675-2	BPD-005	ED-503	KD50	811-005	DC535	5HK-D5	
C28	.35	300	157810-1	PSBHM-35		CUB3P35		PT4035	37M-P35	
C29	5000		144675-2	BPD-005	ED-503	KD50	811-005	DC535	5HK-D5	
C30	68		157496-23	BPD-0168	TCZ-68	1ZHK068		MS-665		
C31	5000		144675-2	BPD-005	ED-503	KD50	811-005	DC535	5HK-D5	
C32	6000		144675-3	BPD-006	ED-603	KD60	811-006	DC535	5HK-D6	
C33	15		137727-43	N750-SH15	TCN-15	TH03	N750K-150		5TCU-Q15	
C34	5		137727-103							
C35	.1	150	157906-1	P288N-1	DF-104	CUB2P1		PT401	27M-P1	
C36	33	400	197727-125							
C37	.1	400	194787-47	P488M-1	DF-104	CUB4P1		PT401	47M-P1	
C38	68		137727-133							
C39	82		137727-54							
C40	5000		144675-2	BPD-005	ED-503	KD50	811-005	DC535	5HK-D5	
C41	.01	300	39476-41	BPD-01	DE-103	CUB4S1	GP3-333-103	PT411	47M-S1	
C42	68		137727-133							
C43	15		137727-43							
C44	6000		144675-3	BPD-006	ED-603	KD60	811-006	DC535	5HK-D6	
C45	.01	300	39476-41	BPD-01	DE-103	CUB4S1	GP3-333-103	PT411	47M-S1	
C46	1000		185815-17	BPD-001	ED-103	KD69	801-001	DC531	5HK-D1	
C47	.02	300	39001-80	BPD-02	DF-303	CUB4S3	817-03	PT413	37M-S3	
C48	.02	400	39001-80	BPD-02	DF-303	CUB4S3	817-03	PT413	47M-S3	
C49A	270									
B	2000		†170207-1	†PA-523						
C	25									
C50	.05	300	39001-17	BPD-05	DF-503	CUB3S5	817-05	PT415	37M-S5	
C51A	4700		†157183-1	†PA-983-2	†PC-106	†D179	811-0047	UC-5247	†D1C12	
B	4700					†D179	812-0047	UC-5247		
C53	.01	400	39476-42	BPD-01	DE-103	CUB4S1	GP3-333-103	PT411	47M-S1	
C54	680		144675-33		1484-00056	DD-681	185756	811-681		MS-356
C55	.047	400	39478-45	BPD-05	DF-503	CUB4S47		PT4147	47M-S47	
C56	.05	300	39001-35							
C57	.047	400	39478-45	BPD-05	DF-503	CUB4S47		PT4147	47M-S47	
C58	5000		185815-35	BPD-005	ED-503	KD50	811-005	DC535	5HK-D5	
C59	20		137727-61							
C60	53		137727-126							
C61	.05	400	39001-17	BPD-05	DF-503	CUB4S5		PT415	47M-S5	
C62	.35	25	157810-1	PSBHM-35		CUB3P35		PT4035	37M-P35	
C63	.05	300	39001-80	BPD-03	DF-303	CUB3S3	817-03	PT413	37M-S3	
C64	230	500	157698-23	1489-00022	D6-231	22SE7Z2	811-231		5HS-232	
C65	100		157496-47							
C66	1300		137499-67	1484-0013		1BSD13			M2S13	
C67	390		158215-77			5BST39			5HS-392	Note 1, 2
C67	.35	400	39001-97	P484M-35		CUB4P35		PT4035	47M-P35	
C68	100	3000	158215-33	HVD-32-100	DD30-101	V3T1	3KV-101	DC3031	30GA-T1	
C69	.05	300	39001-35							
C70	68	3000	158215-3	HVD-30-68	DD30-680	V3Q68	3KV-68	DC30468	30GA-Q68	
C71	1000		144675-14	BPD-001	ED-103	KD69	801-001	DC531	5HK-D1	
C72	5000		144675-3	BPD-005	ED-503	KD50	811-005	DC535	5HK-D5	
C73	5000		144675-2	BPD-006	ED-603	KD60	811-006	DC535	5HK-D6	

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PARTS LIST AND DESCRIPTIONS (cont)

CAPACITORS (cont)

ITEM No.	RATING CAP	VOLT	REPLACEMENT DATA CROSLEY Part No.	AEROVOX Part No.	CENTRALAB Part No.	CORNELL DUBILIER Part No.	ERIE Part No.	MALLORY Part No.	SPRAGUE Part No.	NOTES
C74	5000		144675-2	BPD-005	DD-502	KD50	811-005	DC535	5HK-D5	Note 1
C75	5000		144675-3	BPD-006	DD-502	KD60	811-006	DC535	5HK-D6	

† Items C49A, C49B, C49C, R50A, R50B and R50C are combined in one unit.
* Items C51A, C51B, R54A and R54B are combined in one unit.
Note 1: Not used in some versions.
Note 2: Some versions use 430MMF unit or 1300MMF unit (part #137449-57) in this application.

CONTROLS

ITEM No.	RATING RESISTANCE	WATTS	REPLACEMENT DATA CROSLEY Part No.	CENTRALAB Part No.	CLAROSTAT Part No.	IRC Part No.	MALLORY Part No.	INSTALLATION NOTES
R1	1500Ω		B1T137-1-1					Contrast & Switch
R2A	330Ω		B157803-1-4		A47-500K-Z	Q13-128	TA334A	Volume
B	Switch		Not Req.		SW8-12	T6-1	U3-36	Attach to R2A
C	Shaft		Not Req.		PS-31	Not Req.	Not Req.	Attach to R2A
R3A	145Ω	½	B157802-1-5	4B-35	A47-75K-B	4Q11-125	4TA151.	Horiz. Hold with 70K stop.
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R3A
R4A	500K	½	B159336-1-3	TAB-4B	TA47-750K-B	Q11-136	TTA164A	Vert. Hold with 150K stop.
B	Shaft		Not Req.	AK-3	FS-3	Not Req.	Not Req.	Attach to R4A
R5A	5Meg	½	B157810-1-5	AB-8B		Q17-141	PTA56R	Brightness
B	Shaft		Not Req.	AK-19		CQ	Not Req.	Attach to R5A
R6A	250Ω	2	B159766-1-1		A43-250Ω	WP6250Ω	R250Ω.	Vert. Linearity (Wire-wound)
B	Shaft		Not Req.		FS2-1	Not Req.	Not Req.	Attach to R6A (Note 1)
R6A	750Ω	½	B157806-1-4		A47-750-B	Q11-105	PTA75L.	Vert. Linearity
B	Shaft		Not Req.		FS-3	Not Req.	Not Req.	Attach to R6A
R7A	5Meg	½	B157806-1-4	TAB-8B	TA47-5Meg-B	†Q11-141	†PTA56L.	Height with 1Meg stop.
B	Shaft		Not Req.	AK-19		Not Req.	Not Req.	Attach to R7A
R9	90K	½	B159037-1-1					Picture Guard (Note 2)
R2	500Ω	5	B157956-2		2B-500			Buzz (Wire wound)

* Cosanect a 68K resistor in series with the right hand terminal of the control and the lead connecting to the same terminal of the original control. (Control viewed from shaft end, terminals down.)
† Connect a 150K resistor in series with the left hand terminal of the control and the lead connecting to the same terminal of the original control. (Control viewed from shaft end, terminals down.)
† Connect a 1Meg resistor in series with the right hand terminal of the control and the lead connecting to the same terminal of the original control. (Control viewed from shaft end, terminals down.)
Note 1: Alternate control used in some versions.
Note 2: Control has open spot on one end.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	WATT	REPLACEMENT DATA CROSLEY Part No.	IRC Part No.	NOTES
R10	680K			BTS-680K	
R11	10K		39274-37	BTS-10K	
R13	3300Ω		39274-29	BTS-3300	
R23	330K		39274-53	BTS-330K	
R14	10K		39274-37	BTS-10K	
R15	10K		39274-37	BTS-10K	
R16	10K		39274-39	BTS-15K	
R17	6800Ω		39274-36	BTS-6800	
R18	1Meg		39274-58	BTS-1Meg	
R19	10Meg		39274-85	BTS-10Meg	
R20	100KΩ		39274-25	BTS-100K	
R21	4700Ω		39274-33	BTS-4700	
R22	3700Ω		39274-30	BTS-3700	
R23	10K		39274-37	BTS-10K	
R24	10000Ω		39274-35	BTS-10000	
R25	47Ω		39274-9	BTS-47	
R26	330Ω		39274-17	BTS-330	
R27	1000Ω		39274-25	BTS-1000	
R28	10000Ω		39274-35	BTS-10000	
R29	68Ω		39274-11	BTS-68	
R30	12K		39274-31	BTS-12K	
R31	10000Ω		39274-35	BTS-10000	
R32	150Ω		39274-15	BTS-150	
R33	1Meg		39274-61	BTS-1Meg	
R34	5600Ω		39274-34	BTS-5600	
R35	1Meg		39274-61	BTS-1Meg	
R36	6200Ω		39274-32	BTS-6200	
R37	4700Ω	2	156811-4	BTS-4700	
R38	10K		39274-37	BTS-10K	
R39	33K	2	39274-219	BTS-33K	
R40	47Ω		39274-9	BTS-47	
R41	100K		39274-49	BTS-100K	
R42	390K		39274-56	BTS-390K	
R43	820K		39274-60	BTS-820K	
R44	18K		39274-40	BTS-18K	
R45	150Ω		39274-15	BTS-150	
R46	470Ω		39274-51	BTS-470	
R47	5600Ω	1	39274-152	BTA-5600	
R48	560K		39274-58	BTS-560K	

† Items R50A, R50B, R50C, C49A, C49B and C49C are combined in one unit.
* Items R56A, R56B, C54A, C54B are combined in one unit.
Note 1: In chassis stamped code "E", a 10K resistor is used in this application. (part #39274-37)
Note 2: Not used in chassis stamped code "E".
Note 3: Used in chassis stamped code "A" and "B" only.
Note 4: Used in chassis stamped code "C" only.

ITEM No.	RATING OHMS	WATT	REPLACEMENT DATA CROSLEY Part No.	IRC Part No.	NOTES
R49	470K		39274-57	BTS-470K	
R50A	10K			BTS-10K	
B	220Ω		†170207-1	BTS-220K	
C	3.2Meg			BTS-3.2Meg	
R51	1Meg		39274-61	BTS-1Meg	
R53	680K		39274-59	BTS-680K	
R55	15K		39274-39	BTS-15K	
R54	6800Ω		39274-35	BTS-6800	
R52	4700Ω			BTS-4700	
R56A	25K		‡157811-1	BTS-25K	
B	10K			BTS-10K	
R57	5600Ω		39274-34	BTS-5600	Note 1
R58	3.2Meg		39274-59	BTS-3.2Meg	
R59	390Ω		39274-30	BTS-390	Note 2
R60	56000Ω	2	156811-4	BTS-56000	
R61	68KΩ		39274-33		
R62	560Ω		39274-22		
R63	100Ω		39274-25	BTS-1000	
R64	150K		39274-51	BTS-150K	
R65	390K		39274-56		
R66	180K		39274-53		
R67	150K		39274-51		
R68	92K 5%		39274-96		
R69	6200Ω		39274-32	BTS-6200	
R70	27K		39274-43		
R71	100K		39274-49		
R72	2.7Meg		39274-71		
R73	18K		39274-40		
R74	100Ω		39274-13		
R75	470K		39274-57		
R76	6200Ω	2	156911-10		
R77	22Ω	1	39274-03		
R78	4700Ω		39274-33		
R79	45Ω	20	156230-3		
R80	7.5Ω		156490-1	FR-7.5	
R81	33K	1	39274-131	BTA-33K	
R82	33Ω	1	39274-83		
R83	5.2Meg		39274-83	BTS-5.2Meg	Note 3 Note 4

* Drill new mounting hole.
= Parallel with 1.5K resistor.
≠ Parallel with 33K resistor.
‡ Parallel with 10000 resistor.

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA CROSLEY Part No.	Halldorson Part No.	Merit Part No.	ECA TYPE No.	Ram Part No.	Stancor Part No	Thordarson Part No	Triad Part No.
T1	Vert. Osc. Trans.	185255-3	B6704	A-3026			2SA05	A-232 ①	
T2	Horiz. Output Trans.	159413-2 ①	FS42B*	HVO-3**		X123*	A-8263*	FLY-25*	D-42*
T3	Vert. Output Trans.	185725-2	21B07	A-3524		Y214			
T4A	Yoke (90°)	159426-1	DF90①	MDF-92①	23SD①	T90F10①	DY-25A ①	Y-16①	Y-41-①
B		Yoke(49MB) 157546-1	②	②	②	②	②	②	②

① Drill new mounting hole(s).
② Yoke rear cover and centering device.
Use original rear cover and centering device.
Use original yoke damping network.
To mount same as original, loosen and rotate core clamp 180°. In this position, connect horiz. damping capacitor across from #1 and #2 and jumper terms #3 and #5. To mount with leads out bottom as supplied, connect horiz. damping capacitor across terms #3 and #7 and jumper terms #1 and #5.

* HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

Use Original Width Coil Unless Replacement Type is Listed

	ORIGINAL TERMINAL CONNECTIONS	Halldorson Replacement Connections	Merit Replacement Connections	RCA Replacement Connections	Ram Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
	6	6	6	6	6	6	6	6
	1 or 3	3	3	3	3	3	3	3
	5	5	5	5	2	5	5	5
	2	2	2	2	1	2	2	2

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	SEC.	REPLACEMENT DATA CROSLEY Part No.	Halldorson Part No.	Merit Part No.	Stancor Part No.	Thordarson Part No.	Triad Part No.	NOTES
T5	2.2K	3-4Ω	157919-1	23005 ①	A-3928 ①	A-3332	24850 ①	S-1X ①	① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS SIZE	FIELD	V. C. IMP.	REPLACEMENT DATA CROSLEY Part No.	QUAM Part No.	RCA TYPE No.	NOTES
SP1	8 1/4"	PM	3-4Ω	154812-1 ①	8SA1	31T81	① Used in table models.
	8"	PM	3-4Ω	154833-1 ①			② Used in console models.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA DC RES. PRI.	SEC.	CROSLEY Part No.	MERIT Part No.	MILLER Part No.	NOTES
L1A	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-2			Channel 2
B	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-3			Channel 3
C	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-4			Channel 4
D	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-5			Channel 5
E	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-6			Channel 6
F	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-7			Channel 7
G	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-8			Channel 8
H	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-9			Channel 9
I	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-10			Channel 10
J	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-11			Channel 11
K	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-12			Channel 12
L	Ant., RF, Mixer Grid, Osc. Coils	0Ω		156046-13			Channel 13
L2	Conv. Plate	.6Ω		156046-14			Channel 14
L3	1st Video IF	.3Ω		157787-1	17-1003	TV-123	6183	Core part #158204-2.
L4	2nd Video IF	.3Ω	.3Ω	157789-1	17-1002	TV-116	6250	Core part #158204-2.
L5	Til. Choke	9Ω		155256-1	19-3001	TV-129	6175	.6 Microhenry
L6	3rd Video IF	.6Ω	.6Ω	158310-1			6259*	Includes 3L 6MC trap
L7	4th Video IF	.4Ω	.4Ω	157844-1			6281	
L8	Series Peaking Coil	3.2Ω		154378-1	19-1006		4634	15 Microhenries
L9	Shunt Peaking Coil	18Ω		159210-1	19-3500		5144	550 Microhenries Core part #158204-2.
L10A	4.5MC Trap	3.5Ω		157841-1				
B	1st Sound IF	.9Ω						
L11	Shunt Peaking Coil	34Ω		159215-1	19-4950=		6187=	905 Microhenries; Wound on 1.8K resistor.
L12	Series Peaking Coil	15Ω		158637-1	19-3350≠	TV-185≠	6181≠	240 Microhenries; Wound or 33K resistor. Core part #158204-2.
L13	2nd Sound IF	1.2Ω	2.1Ω	159418-1				
L14	Quadrature Coil	5.2Ω		157842-1			1480	Core part #158204-2.
L15	RF Choke	44Ω		159483-1	19-1004	RC-527	6686	3.5 Microhenries
L16	RF Choke	6.3Ω		159483-1	19-3100≠	TV-181≠	6112≠	102 Microhenries; Wound on 10000 resistor.

* Drill new mounting hole.
= Parallel with 1.5K resistor.
≠ Parallel with 33K resistor.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES. PRI.	SEC.	REPLACEMENT DATA CROSLEY Part No.	MEISSNER Part No.	MERIT Part No.	MILLER Part No.	RCA TYPE No.	Ram Part No.	Thordarson Part No	NOTES
L17	42Ω	95Ω	157721-1	50-1403*	TV-182*	6182*	2052U *	H-100*	HO-3*	Waveform winding - 39Ω - Core part #39012-07.

* Reverse coil mounting in can.

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	D.C. RESISTANCE	INDUCTANCE (D. CURRENT 1000 M/A)	REPLACEMENT DATA CROSLEY Part No.	Halldorson Part No	Merit Part No	Stancor Part No	Thordarson Part No	Triad Part No.
L18	230A	58Ω	1HY	156529-1	C5040	C-2974 ①	C-2327 ①	28C41	C-32X ①

① Drill one new mounting hole.

CROSLEY MODELS J-21CABH, CABU, CAMH, CAMU; J-21RABH, RABU, RAMH, RAMU, J-21TABH, TABU, TAMH, TAMU, TAWH, TAWU (CH. 483, 484)

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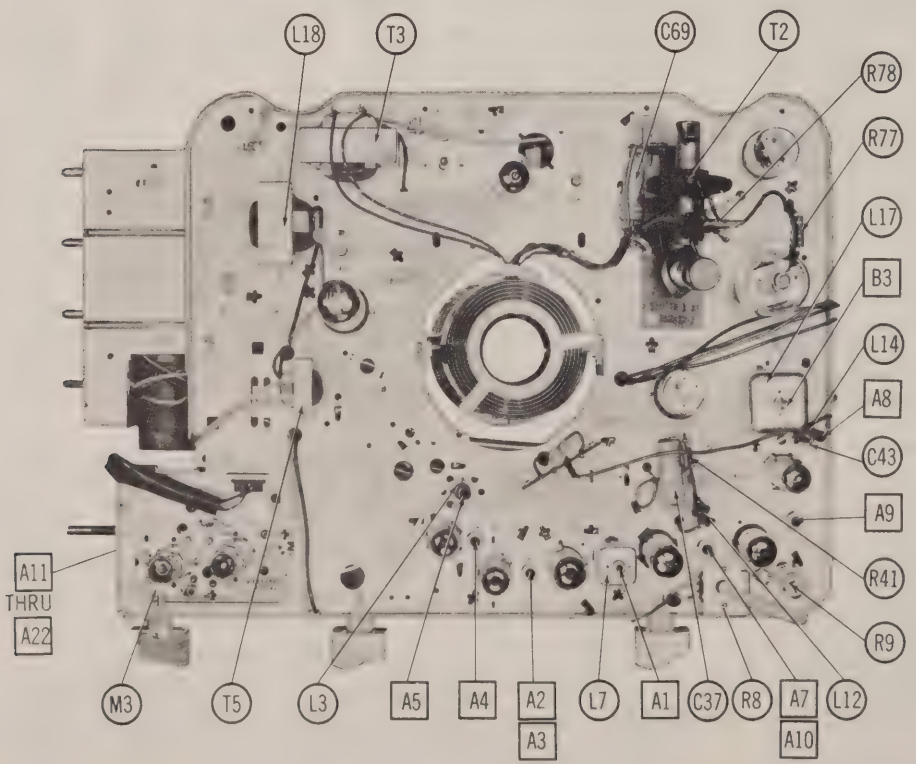
PARTS LIST AND DESCRIPTIONS (Continued)

SELENIUM RECTIFIER

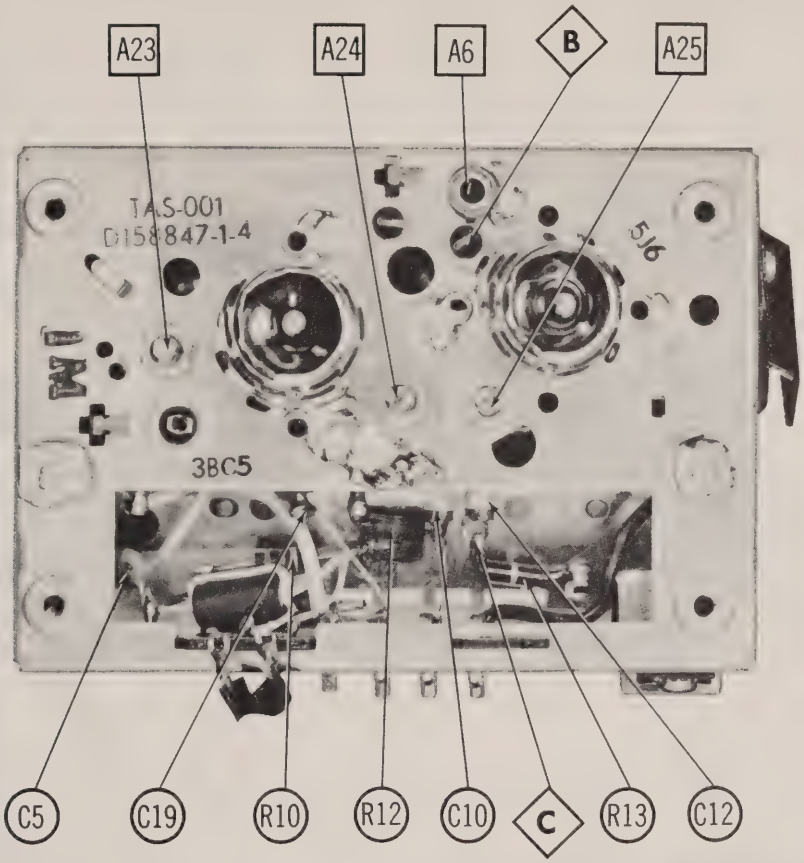
ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	CROSLEY PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	
M1	.220A	155575-2	1236A	MR300	6S300	6Q4	300	
M2	.220A	155575-2	1236A	MR300	6S300	6Q4	300	

MISCELLANEOUS

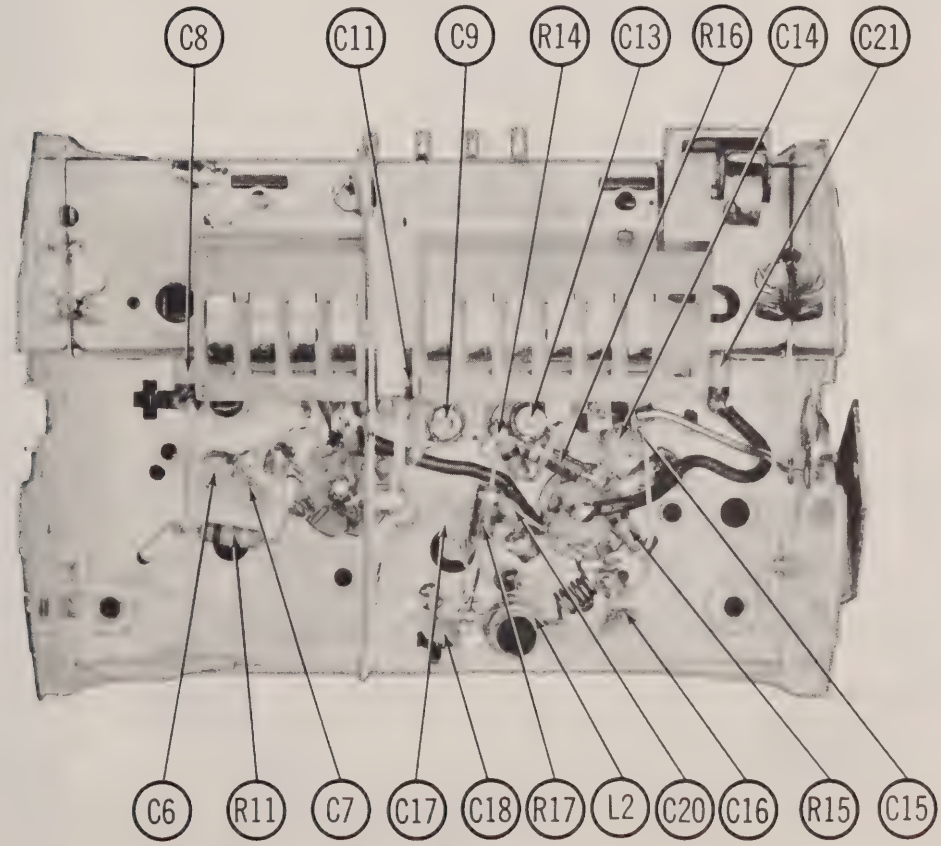
ITEM No.	PART NAME	CROSLEY PART No.	NOTES
M3	Tuner	158847-1	VHF-Chassis 483 only.
	Tuner	158674-1	VHF-Chassis 484 only.
M4	Tuner	159952-1	UHF-Chassis 484 only.
M5	Centering Device	153586-1	Includes Deflection Yoke (T4) Rear Cover
M6	Ion Trap	153109-2	
B1	Trimmer Cap.	157870-1	Horiz. Lock (10-160MMF)
B4	Trimmer Cap.	159882-1	Horiz. Drive (160- 400MMF) Used in chassis coded C & D only.
	Cabinet	171154-7	Model J-21TAWU.
	Cabinet	171151-3	Model J-21TAWH.
	Cabinet	171302-3	Model J-21TAMU.
	Cabinet	171302-4	Model J-21TABU.
	Cabinet	171302-1	Model J-21TAMH.
	Cabinet	171302-2	Model J-21TABH.
	Cabinet	171302-7	Model J-21CAMU.
	Cabinet	171302-8	Model J-21CABU.
	Cabinet	171302-5	Model J-21CAMH.
	Cabinet	171302-6	Model J-21CABH.
	Cabinet	171302-9	Model J-21RAMU.
	Cabinet	171302-10	Model J-21RABU.
	Cabinet	171302-11	Model J-21RAMH.
	Cabinet	171302-12	Model J-21RABH.
	Knob	157753-4	VHF Channel Selector - Models J-21TAWU, J-21TAWH.
	Knob	157753-10	VHF Channel Selector - Models J-21TAMU, J-21TAMH, J-21CAMU, J-21CAMH, J-21RAMU, J-21RAMH.
	Knob	157753-7	VHF Channel Selector - Models J-21TABU, J-21TABH, J-21CABU, J-21CABH, J-21RABU, H-21RABH.
	Knob	157754-1	VHF Fine Tuning - All Models
	Knob	159222-1	UHF Channel Selector - Model J-21TAWU.
	Knob	159222-2	UHF Channel Selector - Models J-21TAMU, J-21CAMU, J-21RAMU.
	Knob	159222-3	UHF Channel Selector - Models J-21TABU, J-21CABU, J-21RABU.
	Knob	157754-2	UHF Fine Tuning - Models J-21TAMU, J-21TABU, J-21TAWU, J-21CAMU, J-21CABU, J-21RAMU, J-21RABU.
	Knob	157750-1	Auxiliary Controls (4 used) Models J-21TAWU, J-21TAWH.
	Knob	157750-9	Auxiliary Controls (4 used) Models J-21TAMU, J-21TAMH, J-21CAMU, J-21CAMH, J-21RAMU, J-21RAMH.
	Knob	157750-8	Auxiliary Controls (4 used) Models J-21TABU, J-21TABH, J-21CABU, J-21CABH, J-21RABU, H-21RABH.
	Mask	171022-3	Models J-21TAWU, J-21TAWH.
	Mask	171116-1	Models J-21TAMU, J-21TAMH, J-21CAMU, J-21CAMH, J-21RAMU, J-21RAMH.
	Mask	171116-2	Models J-21TABU, J-21TABH, J-21CABU, J-21CABH, J-21RABU, J-21RABH.
	Safety Glass	159054-5	All Models.



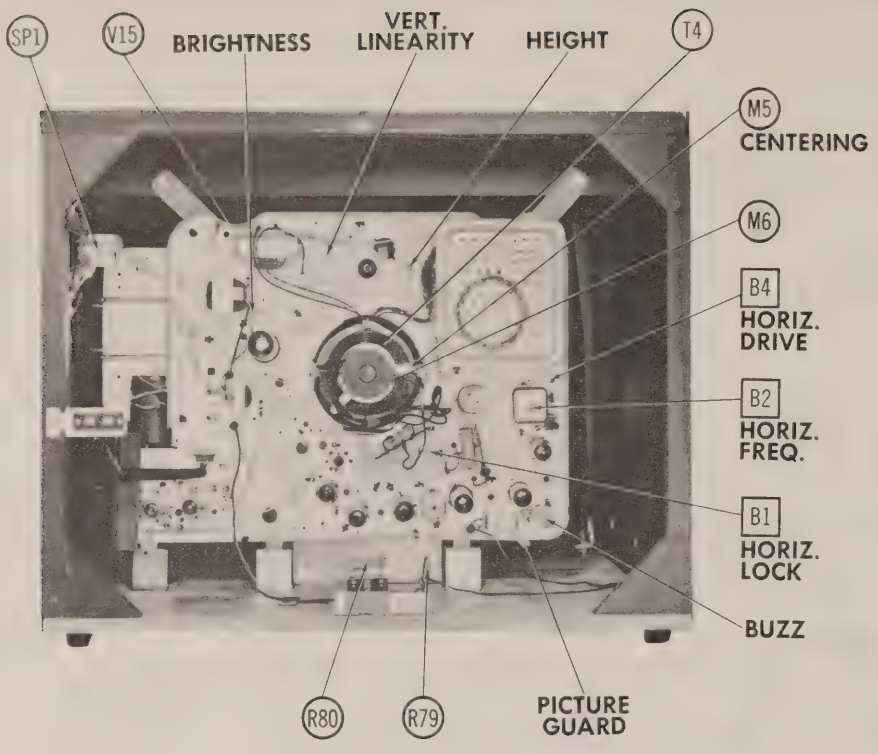
CHASSIS TOP VIEW



RF TUNER-TOP VIEW



RF TUNER-BOTTOM VIEW



CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern.

1. Preset the horizontal lock trimmer (B1) $\frac{1}{2}$ turn from full tight. Adjust the horizontal hold control (R3) and the horizontal frequency slug (B2) until the picture synchronizes horizontally.

2. Connect the vertical amplifier of an oscilloscope thru a 10MMF capacitor to point Ⓓ. Connect low side to chassis. Adjust the horizontal waveform slug (B3) so that peaks are equal as in Fig. 5. Keep the picture in sync by readjusting the horizontal hold and B2 while adjusting B3.

3. Turn the horizontal hold control fully counter clockwise and adjust B2 by turning counter clockwise until the picture is just out of sync as indicated by 3 to 5 bars.

4. Turn the horizontal hold control clockwise until the picture falls out of sync. (If the picture fails to fall out of sync, momentarily switch off station and back again). Then turn horizontal hold control counter clockwise until the picture just falls into sync and note the number of bars present just before the picture locks in. If there are more than 3 bars present just before locking in, adjust B1 slightly counter clockwise. Recheck the number of bars and repeat adjustments of B1 until two or three bars are present.

5. Adjust the horizontal drive trimmer (B4) for a picture of maximum width without the presence of vertical white lines or compression near the center of the picture.

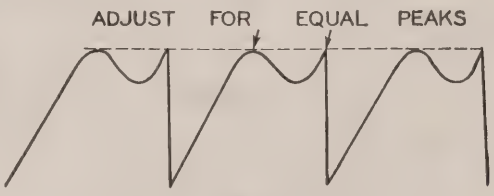
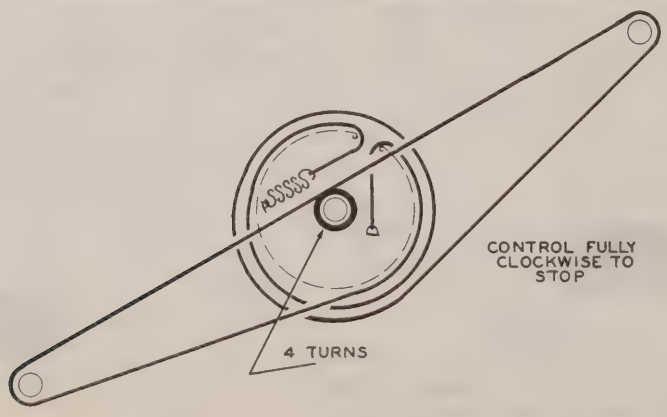
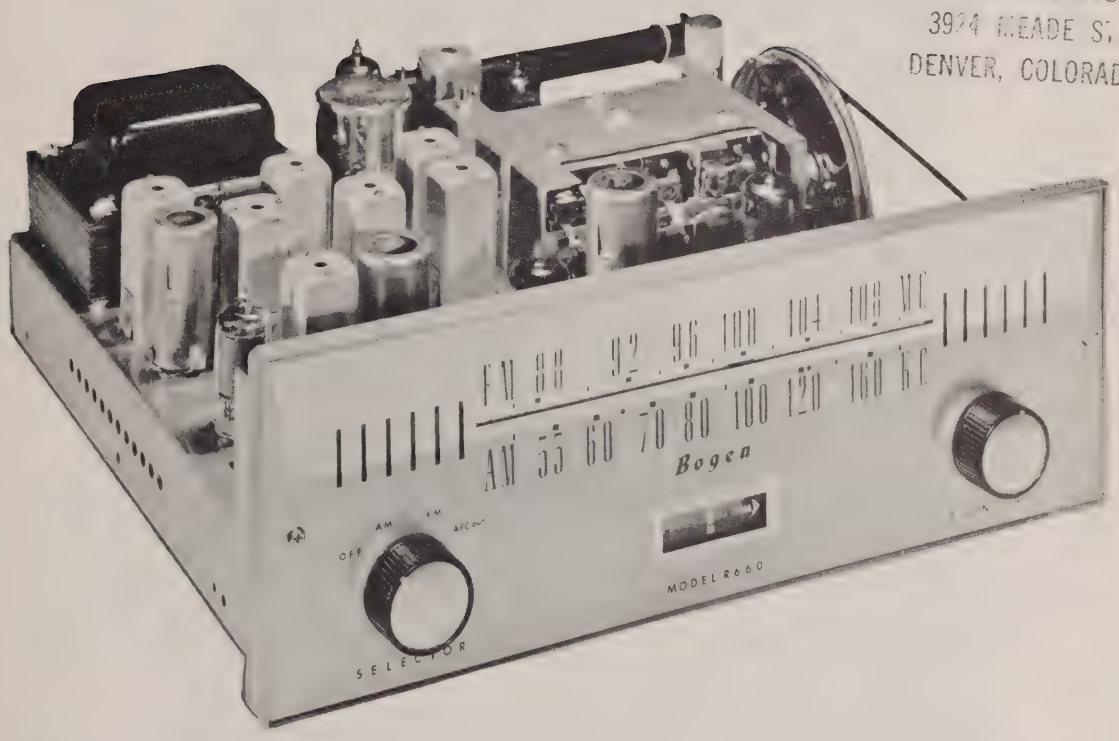


FIG. 5



UHF DRIVE CORD STRINGING

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

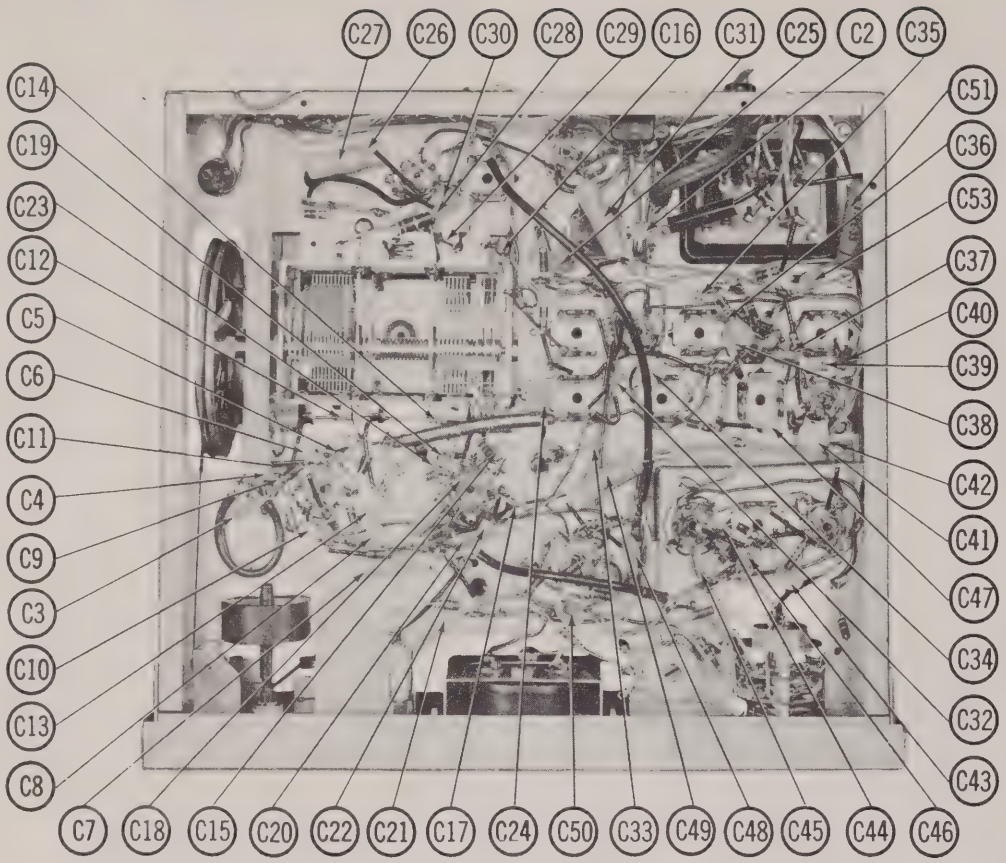


DAVID BOGEN
MODEL R660

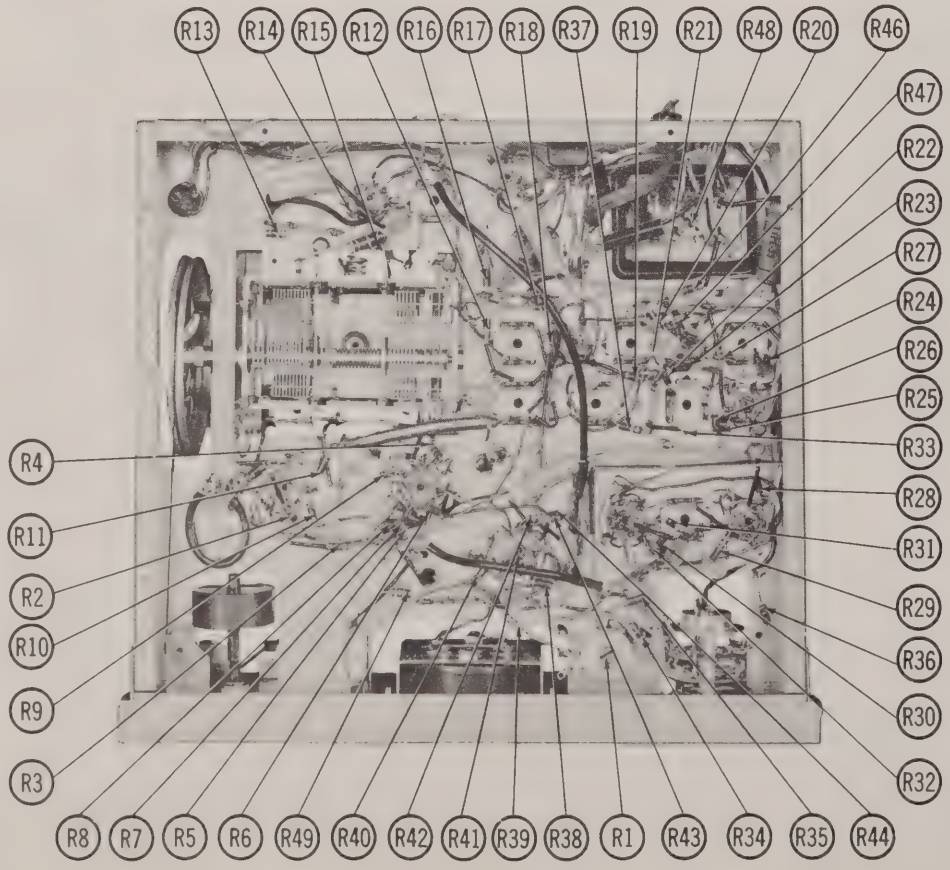
TRADE NAME	David Bogen Model R660	
MANUFACTURER	David Bogen Co., Inc., 29 Ninth Ave., New York 14, N.Y.	
TYPE SET	AC Operated FM-AM Superheterodyne Tuner	
TUBES	Ten	
POWER SUPPLY	110-120 Volts AC-60 Cycles	RATING .51 Amp. @ 117 Volts AC
TUNING RANGE-BROADCAST	530KC-1650KC	FREQ. MOD. 88MC-108MC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

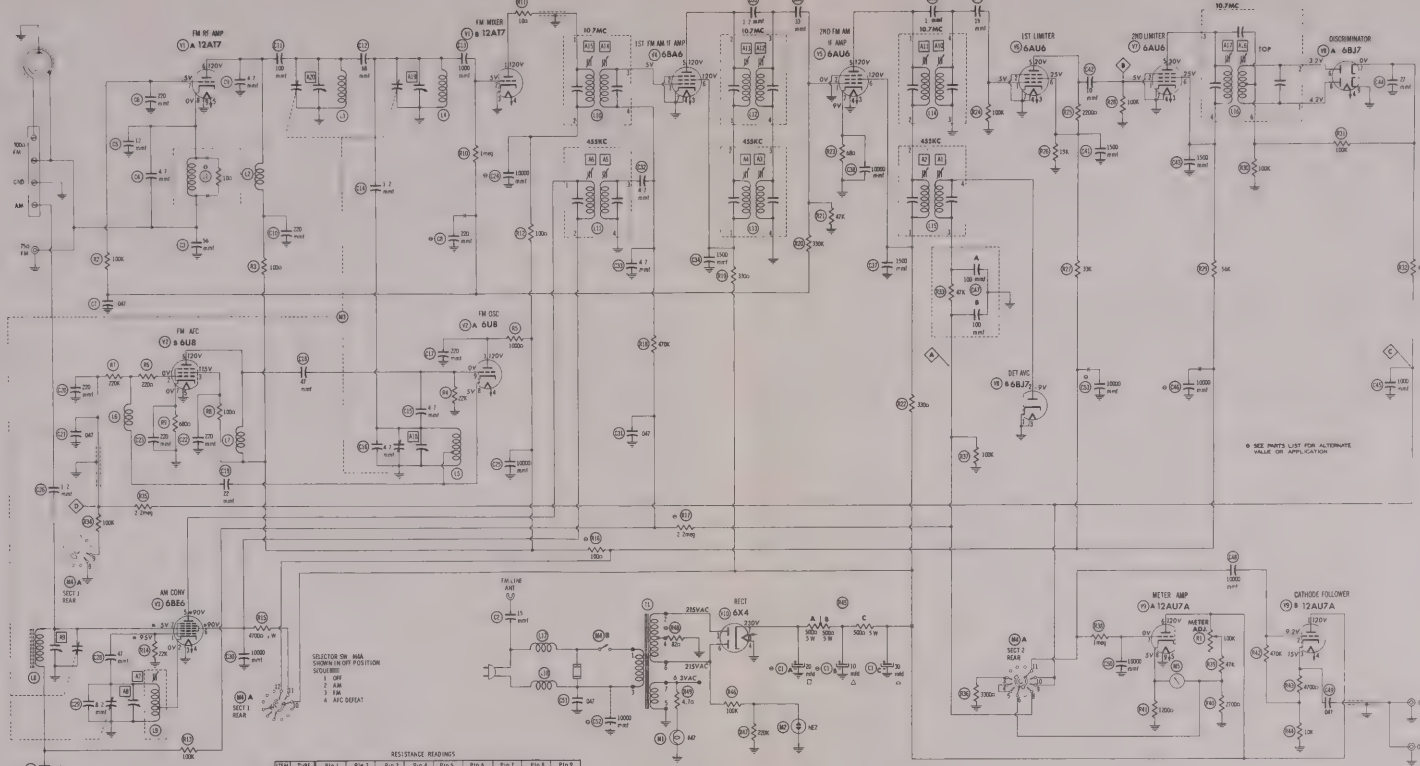
"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed." "Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1956 by Howard W. Sams & Co., Inc., Indianapolis 5, Indiana, U. S. of America. Copyright under international Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AT7	† 170Ω	1 .6Meg	0Ω	1Ω	1Ω	† 170Ω	480K	0Ω	0Ω
V2	6U8	† 250Ω	2 .8Meg	† 170Ω	1Ω	0Ω	† 160Ω	680Ω	0Ω	22K
V3	6BE6	22K	4Ω	0Ω	1Ω	∞ † 650Ω	∞ † 650Ω	2 .6Meg		
V4	6BA6	2 .8Meg	0Ω	1Ω	0Ω	† 180Ω	† 180Ω	0Ω		
V5	6AU6	47K	0Ω	1Ω	0Ω	† 180Ω	† 180Ω	68Ω		
V6	6AU6	100K	0Ω	1Ω	0Ω	† 17K	† 15K	0Ω		
V7	6AU6	100K	0Ω	1Ω	0Ω	† 58K	† 58K	0Ω		
V8	6BJ7	0Ω	150K	0Ω	1Ω	0Ω	100K	200K	100K	0Ω
V9	12AU7	† 150Ω	480K	15K	1Ω	1Ω	† 150Ω	2 .3Meg	1200Ω	0Ω
V10	6X4	180Ω	NC	1Ω	0Ω	NC	1.25Ω	1.2Ω		

ALL MEASUREMENTS TAKEN IN FM POSITION UNLESS OTHERWISE NOTED
† MEASURED FROM PIN 7 OF V10
∞ MEASURED IN AM POSITION
NC NO CONNECTION

1. DC voltage measurements taken with vacuum tube voltmeter, AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to chassis negative.
4. Line volts assumed at 117 volts for voltage readings.
5. Tolerance of ± 10% on voltages and resistance readings makes possible a maximum of ± 20% on voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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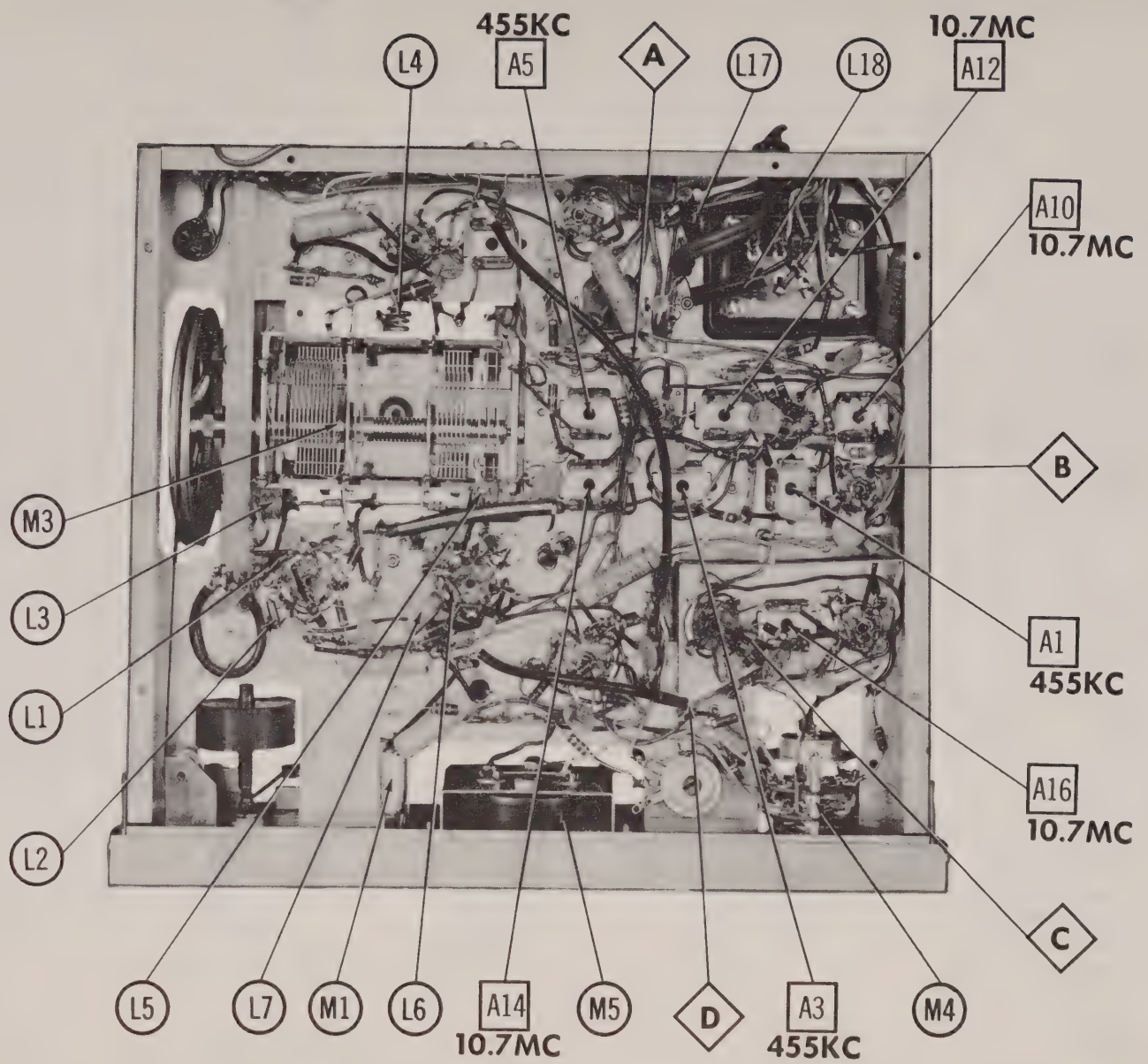


CHASSIS BOTTOM VIEW INDUCTOR AND ALIGNMENT IDENTIFICATION

PROPERTY OF
L. F. ELECTRONICS
3924 MEADE ST.
DENVER, COLORADO

DAVID BOGEN
MODEL R660

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.
Use an insulated alignment screwdriver for adjusting.
Allow 15 minute warm-up period for receiver and equipment.

AM ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.01MFD	High side to pin 7 (grid) of 6BE6 (V3). Low side to chassis.	455KC (400%Mod)	AM	Tuning gang fully open	DC probe to point Ⓐ. Common to chassis.	A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
2.	Direct	High side to AM antenna terminal. Low side to chassis.	600KC	"	600KC	"	A7	"
3.	"	"	1500KC	"	1500KC	"	A8, A9	"

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	.01MFD	High side to pin 2 (grid) of 12AT7 (V1). Low side to chassis.	10.7MC (Unmod)	FM	Point of non-interference	DC probe thru 100K to point Ⓑ. Common to chassis.	A10, A11, A12, A13, A14, A15	Adjust for maximum deflection.
5.	"	"	"	"	"	DC probe thru 100K to point Ⓒ. Common to chassis.	A16	"
6.	"	"	"	"	"	DC probe to point Ⓓ. Common to chassis.	A17	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120% sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4.	.01MFD	High side to pin 2 (grid) of 12AT7 (V1). Low side to chassis.	10.7MC (450KC Swp	FM	Point of non-interference	Vert. Amp. thru 100K to point Ⓑ. Low side to chassis.	A10, A11, A12, A13, A14, A15	Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
5.	"	"	"	"	"	Vert. Amp. thru 100K to point Ⓒ. Low side to chassis.	A16	"
6.	"	"	"	"	"	Vert. Amp. to point Ⓓ. Low side to chassis.	A17	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A16 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
7.	Fig. 3	Thru dummy to FM antenna terminal.	106MC	FM	106MC	DC probe thru 100K to point Ⓑ. Common to chassis.	A18, A19, A20	Connect a short across C21. Adjust for maximum deflection in order given.

FIG. 1

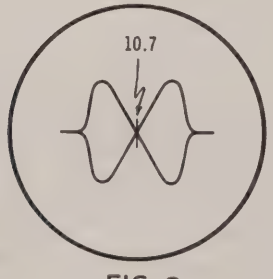


FIG. 2

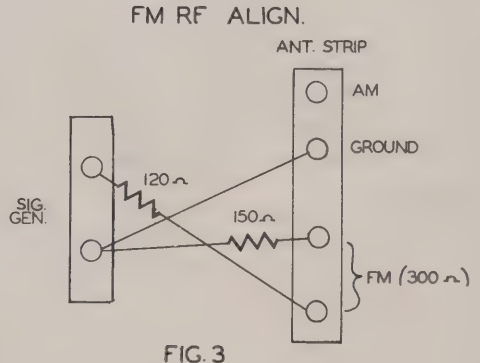


FIG. 3

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	FM RF Amp.-FM Mixer	12AT7	
V2	FM Osc.-AFC	6U8	
V3	AM Converter	6BE6	
V4	1st. IF Amplifier	6BA6	
V5	2nd. IF Amplifier	6AU6	
V6	1st. Limiter	6AU6	
V7	2nd. Limiter	6AU6	

ITEM No.	USE	TYPE	NOTES
V8	Discriminator-AM Det.-AVC	6BJ7	
V9	Meter Amplifier-Cathode Follower	12AU7A	
V10	Rectifier	6X4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA David Bogen PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■20	350	(Note 1)		D042	FP376.6		D-400	R2278 *
B	▲10	350	(Note 1)			TC62		MT-4520	
C	▲30	350							

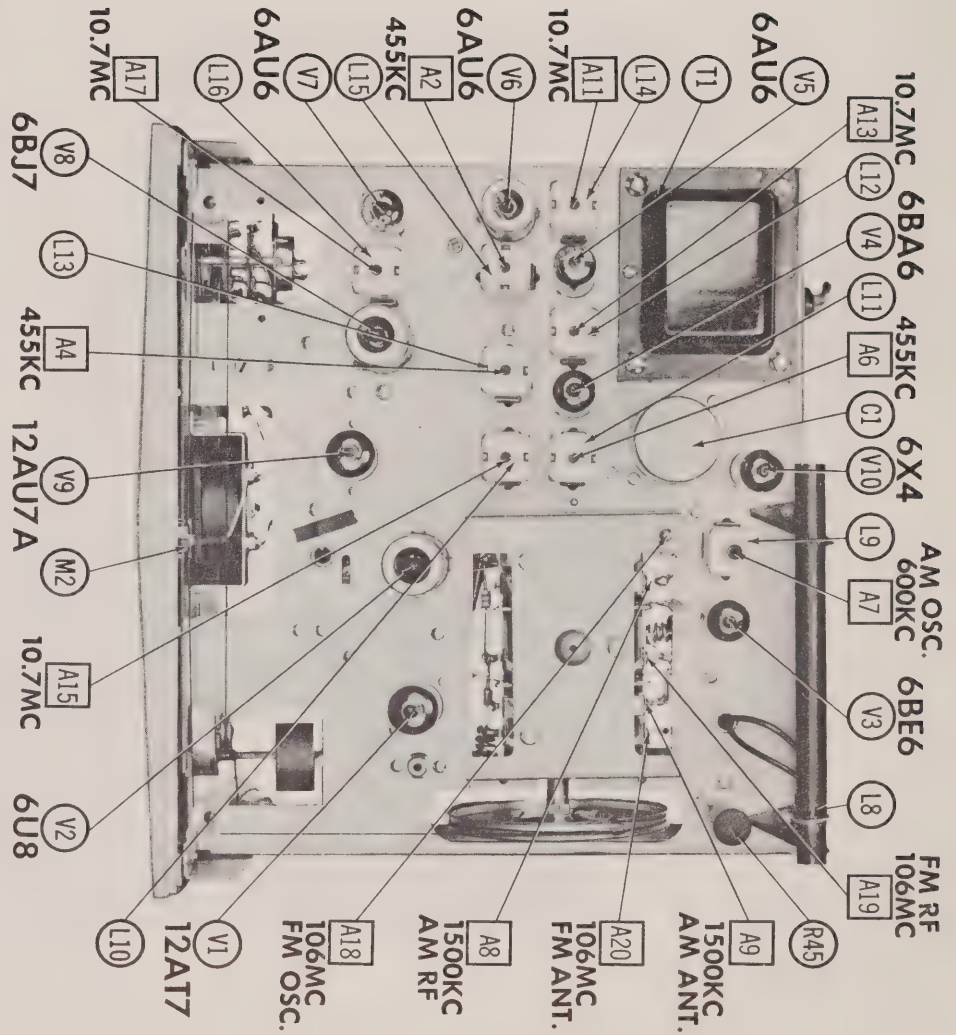
Note 1. In some versions C1A and C1B are reversed.
* Non-catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA David Bogen PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2	15			NP0-SI15	TCZ-15	Z021	NP0K-150		5TCC-Q15	
C3	56			NP0-SI56	TCZ-56	Z036	NP0-337-560		MS-456	
C4	4.7						N330A-4R7			
C5	12			1469-000012	TCZ-12	Z019	NP0K-120		MS-412	
C6	220			DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C7	.047	200		BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C8	220			DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	Note 2
C9	4.7						N330A-4R7			
C10	220			DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C11	100			BPD-0001	DD-101	G042	801-101	UC-531	5GA-T1	
C12	.68				TCZ-R68	TZ02	NP0A-0R68			
C13	1000			BPD-001	DD-102	K069	801-001	DC-521	5HK-D1	
C14	1.2									
C15	4.7			NP0-DI4.7	TCZ-4R7	Z010	NP0A-4R7	ZT-5547	5TCCB-V47	
C16	4.7						N330A-4R7			
C17	220			DI-00022	D6-221	G051	811-221	UC-5322	5GA-T22	
C18	47			BPD-000047	DD-470	G033	831-470	UC-5447	5GA-Q47	
C19	22			BPD-000022	D6-220	G024	831-220	UC-5422	5GA-Q22	
C20	220			DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C21	.047	200		BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C22	220			DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C23	220			DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C24	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	Note 3
C25	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	
C26	1.2									
C27	.047	200		BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C28	47			BPD-000047	DD-470	G033	831-470	UC-5447	5GA-Q47	
C29	8.2			NP0-DI8.2		Z016	NP0A-8R2			
C30	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	
C31	.047	200		BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C32	4.7						N330A-4R7			
C33	4.7			NP0-DI4.7	TCZ-4R7	Z010	NP0A-4R7	ZT-5547	5TCCB-V47	
C34	1500			BPD-0015	DD-152	K071	801-0015	DC-5215	5HK-D15	
C35	1.2									
C36	33			BPD-000033	DD-330	G029	831-330	UC-5433	5GA-Q33	
C37	1500			BPD-0015	DD-152	K071	801-0015	DC-5215	5HK-D15	
C38	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	
C39	1			NP0-SI1	TCZ-1	TZ03	NP0A-010		5TCCB-V1	
C40	15			BPD-000015	DD-150	Z021	NP0K-150		5TCC-Q15	
C41	1500			BPD-0015	DD-152	K071	801-0015	DC-5215	5HK-D15	
C42	10			N750-DI10	TCN-10	N018	N750A-100	NT-541	5TCU-Q1	
C43	1500			BPD-0015	DD-152	K071	801-0015	DC-5215	5HK-D15	
C44	27			NP0-DI25	TCZ-27	Z027	NP0L-270	ZT-5425	5TCC-Q25	
C45	1000			BPD-001	DD-102	K069	801-001	DC-521	5HK-D1	
C46	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	Note 2

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA David Bogen PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C47A	100	}	†	†PA-97-1	†PC-50	†111TM1	†1403-01	UC-531	†D-1	
B	100							UC-531		
C48	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	
C49	.047	200		BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C50	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	
C51	.047	600		BPD-05	DF-503	CUB6S47		PT6147	6TM-S47	
C52	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	Note 2
C53	10000			BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	Note 2

† Items C47A, C47B and R33 are combined in one unit.
Note 2. Not used in some versions.
Note 3. Some versions may use 220MMF in this application.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA David Bogen PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1	100K	½	V392				TA15L	Meter adjust

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA David Bogen PART No.	REPLACEMENT DATA IRC PART No.	NOTES
R2	100K			BTS-100K	
R3	100Ω			BTS-100	
R4	22K			BTS-22K	
R5	1000Ω			BTS-1000	
R6	220Ω			BTS-220	
R7	220K			BTS-220K	
R8	100Ω			BTS-100	
R9	680Ω			BTS-680	
R10	1Meg			BTS-1Meg	
R11	10Ω			BTS-10	
R12	100Ω			BTS-100	
R13	100K			BTS-100K	
R14	22K			BTS-22K	
R15	4700Ω	1		BTA-4700	
R16	100Ω			BTS-100	Note 1
R17	2.2Meg			BTS-2.2Meg	Note 2
R18	470K			BTS-470K	
R19	330Ω			BTS-330	
R20	330K			BTS-330K	
R21	47K			BTS-47K	
R22	330Ω			BTS-330	
R23	68Ω			BTS-68	
R24	100K			BTS-100K	
R25	2200Ω			BTS-2200	
R26	15K			BTS-15K	

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA David Bogen PART No.	REPLACEMENT DATA IRC PART No.	NOTES
R27	33K			BTS-33K	
R28	100K			BTS-100K	
R29	56K			BTS-56K	
R30	100K			BTS-100K	
R31	100K			BTS-100K	
R32	68K			BTS-68K	
R33	47K		†	BTS-47K	
R34	100K			BTS-100K	
R35	2.2Meg			BTS-2.2Meg	
R36	3300Ω			BTS-3300	
R37	100K			BTS-100K	
R38	1Meg			BTS-1Meg	
R39	47K			BTS-47K	
R40	2700Ω			BTS-2700	
R41	1200Ω 5%			BTS-1200 5%	
R42	470K			BTS-470K	
R43	4700Ω			BTS-4700	
R44	10K			BTS-10K	
R45A	500Ω	5		PW7-500	
B	500Ω	5		PW7-500	
C	500Ω	5		PW7-500	
R46	100K			BTS-100K	
R47	220K			BTS-220K	
R48	82Ω			BTS-82	
R49	4.7Ω			BW½-4.7	

† Items R33, C47A, C47B are combined in one unit.
Note 1. Some versions use 220Ω in this application.
Note 2. Some versions use 1Meg in this application.
Note 3. Some versions use 68Ω in this application.

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA David Bogen PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC @.51A	450VCT @.060A	6.3VAC @3.9A		T3139			P-8155 ①		

① Tape 5V winding.

PARTS LIST AND DESCRIPTIONS (Continued)

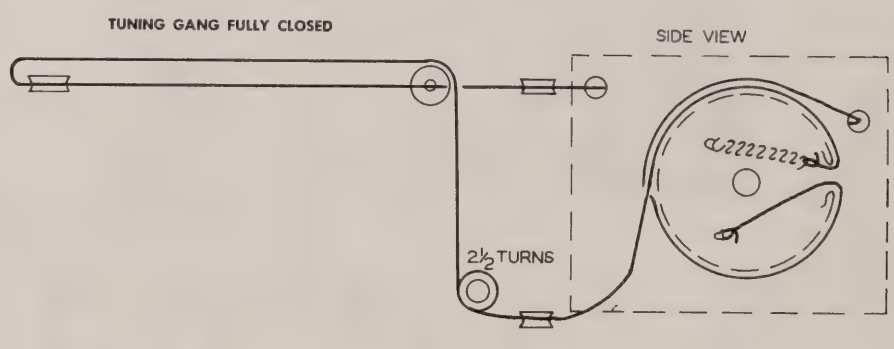
COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA David Bogen PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	RF Choke	0Ω		U451				Wound on 10Ω resistor-Note 1
L2	RF Choke	.1Ω		U420				1.7 Microhenries
L3	FM Ant. Coil	0Ω		U433				
L4	FM RF Coil	0Ω		U434				
L5	FM Osc. Coil	0Ω		U435				Tapped
L6	RF Choke	0Ω		U432	19-1000		4602	1.1 Microhenries
L7	RF Choke	3Ω		U507				3.3 Microhenries, IRC part #CLA
L8	AM Loop Stick	.4Ω		H452A				
L9	AM Osc. Coil	3.9Ω		H454				Tapped @ .4Ω
L10	1st. FM IF	.7Ω	.7Ω	H355	16-3487	FM-254	1463	
L11	1st. AM IF	17Ω	17Ω	H297	16-6758	BC-352	12-C1	
L12	2nd. FM IF	.7Ω	.7Ω	H355	16-3487	FM-254	1463	
L13	2nd. AM IF	17Ω	17Ω	H297	16-6758	BC-352	12-C1	
L14	3rd. FM IF	.7Ω	.7Ω	H355	16-3487	FM-254	1463	
L15	3rd. AM IF	17Ω	17Ω	H297	16-6758	BC-353	12-C2	
L16	Discriminator	.7Ω	.8ΩCT	H295	17-3494	FM-253	1464	
L17	Line Choke	0Ω		U512				
L18	Line Choke	0Ω		U512				

Note 1. Resistor not used in some versions.

MISCELLANEOUS

ITEM No.	PART NAME	David Bogen PART No.	NOTES
M1	Dial Light		#47 (Meter Illumination)
M2	Neon Light		#NE2 (Dial Pointer)
M3	Tuning Cap.	C635	5 Gang (AM Sections: 27-530MMF, 13-195MMF)
M4A	Switch	S462A	On-off (Power) SPST
B	Switch	S462A	Selector (Rotary, wafer type)
M5	Meter	H453	Tuning



DIAL CORD STRINGING

FIRESTONE MODEL 4-C-29 (Code 120-6-TT600)

PROPERTY OF
L. F. [illegible] SHOP
3924 MEADE ST.
DENVER, COLORADO

FIRESTONE MODEL
4-C-29 (Code 120-6-TT600)

FIRESTONE MODEL
4-C-29 (Code 120-6-TT600)

TRADE NAME	Firestone Model 4-C-29 (Code 120-6-TT600)
MANUFACTURER	Firestone Tire & Rubber Co., 1200 Firestone Parkway, Akron, Ohio
TYPE SET	Batter Operated Portable AM Superheterodyne Receiver With Transistorized Output
TUBES (Three)	Types 1V6 Converter, 1AH4 IF Amplifier, 1AJ5 Det. -AVC-AF Amp.
POWER SUPPLY	4 Volts "A" Supply & 45 Volts "B" Supply RATING 55MA @ 4 Volts DC & 3MA @ 45 Volts DC
TUNING RANGE—BROADCAST	540KC - 1610KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to pin 4 (grid) of 1AH4 (V2). Low side to chassis.	455KC (400~ mod.)	Tuning gang fully open.	Across voice coil.	A1, A2	Adjust for maximum output.
2.	"	High side to pin 3 (grid) of 1V6 (V1). Low side to chassis.	"	"	"	A3, A4	"
3.	"	"	1610KC	"	"	A5	"
4.		Loop	1400KC	Tune to 1400KC signal.	"	A6	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.

"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed." "Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1956 by Howard W. Sams & Co., Inc., Indianapolis 5, Indiana, U. S. of America. Copyright under international Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	USE	TYPE	NOTES
X1	Output	OC-71	Note 1
X2	Output	OC-71	Note 1

Note 1. Some versions may use type DR-128. X1 and X2 are a matched pair.

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	Converter	1V6	
V2	IF Amplifier	1AH4	
V3	Det.-AVC-AF Amplifier	1AJ5	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA FIRESTONE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	10	50	CE-528	SRE50V10	BBR10-50	TC32	ML-10-50	MMT-0510	TVA-1304
C2	40	6	CE-406-6	XPP6V40	EC40-6		ML-40-6		TE-1095

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA FIRESTONE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C3	15000		DCC153-5	BPD-015	DD16-153		821-015		5HK-S15	
C4	5		DCC5-5M	NP0-D15	TCZ-4R7	Z011	NP0A-050	ZT-555	5TCCB-V47	Note 1
C5	2000		DCC-502-5M	BPD-002	DD-202	K072	801-002	DC-522	5HK-D2	
C6	5		DCC5-5M	NP0-D15	TCZ-4R7	Z011	NP0A-050	ZT-555	5TCCB-V47	
C7	50			DI-00005	DD-500	G034	831-500	UC-545	5GA-Q5	Note 1
C8A	150		†PC-TT600							
B	1000									
C	10000									
D	100									
C9	2000			BPD-002	DD-202	K072	801-002	DC-522	5HK-D2	Note 1
C10	15000		DCC153-5	BPD-015	DD16-153		821-015		5HK-S15	Note 2
C11	50000		DCC503-5	BPD-05						

Note #1. Not used in some versions.
Note #2. Some versions may use .05MFD in this application (Part No. DCC503-5).
† Items C8A, C8B, C8C, C8D, R7A and R7B are combined in one unit.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA FIRESTONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1	1Meg	½	RV-528					Volume & switch

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA FIRESTONE PART No.	REPLACEMENT DATA IRC PART No.	NOTES
R2	4.7Meg		R475-1/3	BTR-4.7Meg	
R3	470K			BTR-470K	Note 1
R4	10Meg		R106-1/3	BTR-10Meg	
R5	4.7Meg		R475-1/3	BTR-4.7Meg	
R6	68K			BTR-68K	Note 2
R7A	6.8Meg		†PC-TT600	BTR-6.8Meg	
B	270K			BTR-270K	
R8	120Ω		R121-1/3S	BTR-120	
R9	2700Ω		R272-1/3S	BTR-2700	

† Items R7A, R7B, C8A, C8B, C8C, C8D are combined in one unit.
Note 1. Some versions use 1Meg in this application (Part #R105-1/3).
Note 2. Some versions use 100K in this application (Part #R104-1/3).

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO (INPUT)

ITEM No.	Resistance PRI.	Resistance SEC.	REPLACEMENT DATA FIRESTONE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	3.25K	34.5Ω CT	T1-2104				TR-25		
	Turns Ratio								
	8½ :	1							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA FIRESTONE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	435Ω	14.6Ω	TO-1401				TR-16		

SPEAKER

ITEM No.	RATINGS SIZE	RATINGS FIELD	RATINGS V. C. IMP.	REPLACEMENT DATA FIRESTONE PART No.	QUAM PART No.	RCA TYPE No.	NOTES
SP1	2 3/4"	PM	14.6Ω	PM-528		222S1	

COILS (RF-IF)

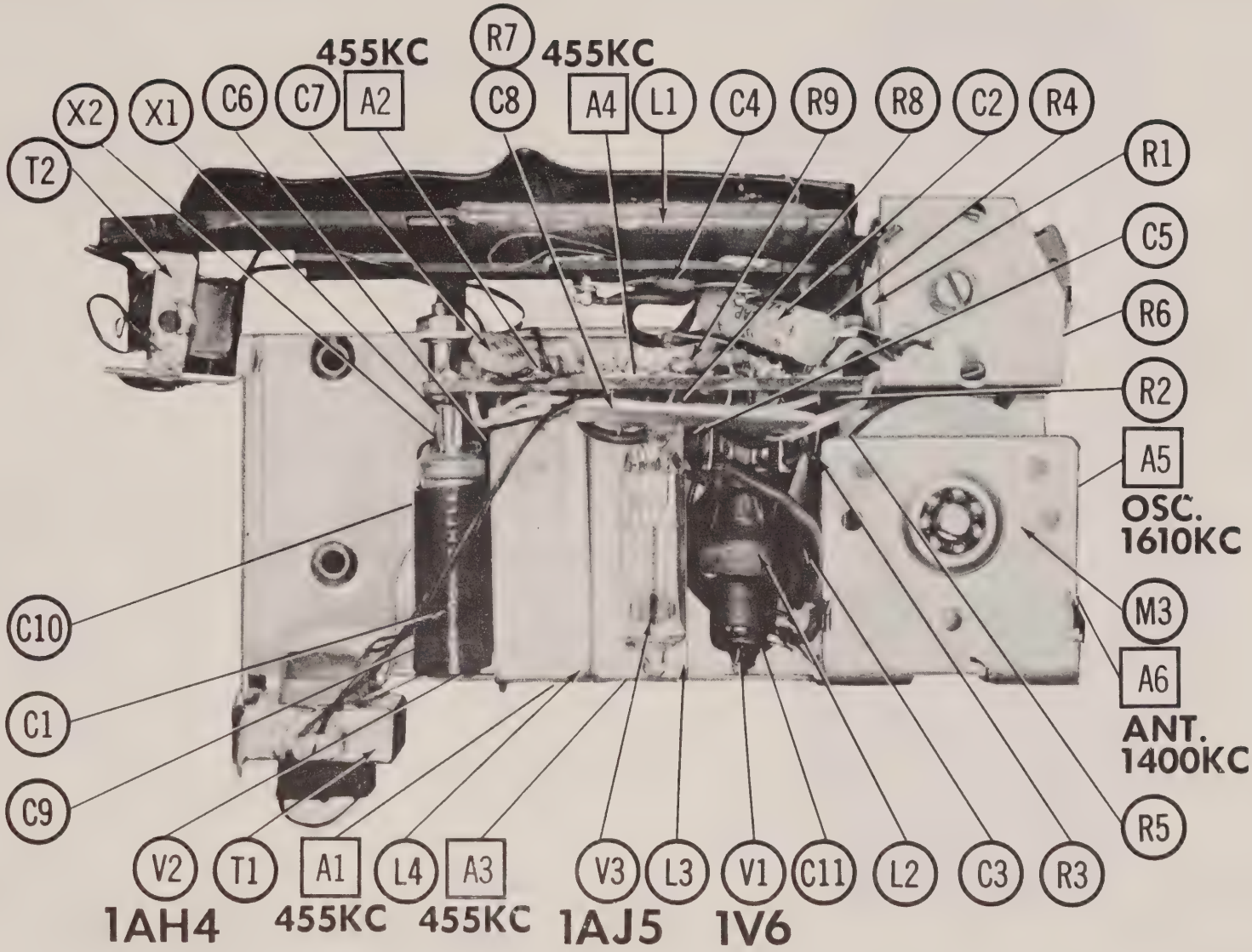
ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA FIRESTONE PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	Loop Stick	2.9Ω		LA-528				
L2	Osc. Coil	2.3Ω	9.3Ω	L-528				
L3	Input IF	16Ω	16Ω	392PC	16-6800		10-C1	
L4	Output IF	19Ω	19Ω	385PC	16-6801		10-C2	

BATTERIES

ITEM No.	VOLTAGE	FIRESTONE PART No.	REPLACEMENT DATA EVEREADY "A"	EVEREADY "B"	EVEREADY "A-B"	BURGESS "A"	BURGESS "B"	BURGESS "A-B"	INSTALLATION NOTES
M1	4V "A"	4-D-137	E233						
M2	45V "B"	4-D-134		415			U30		

MISCELLANEOUS

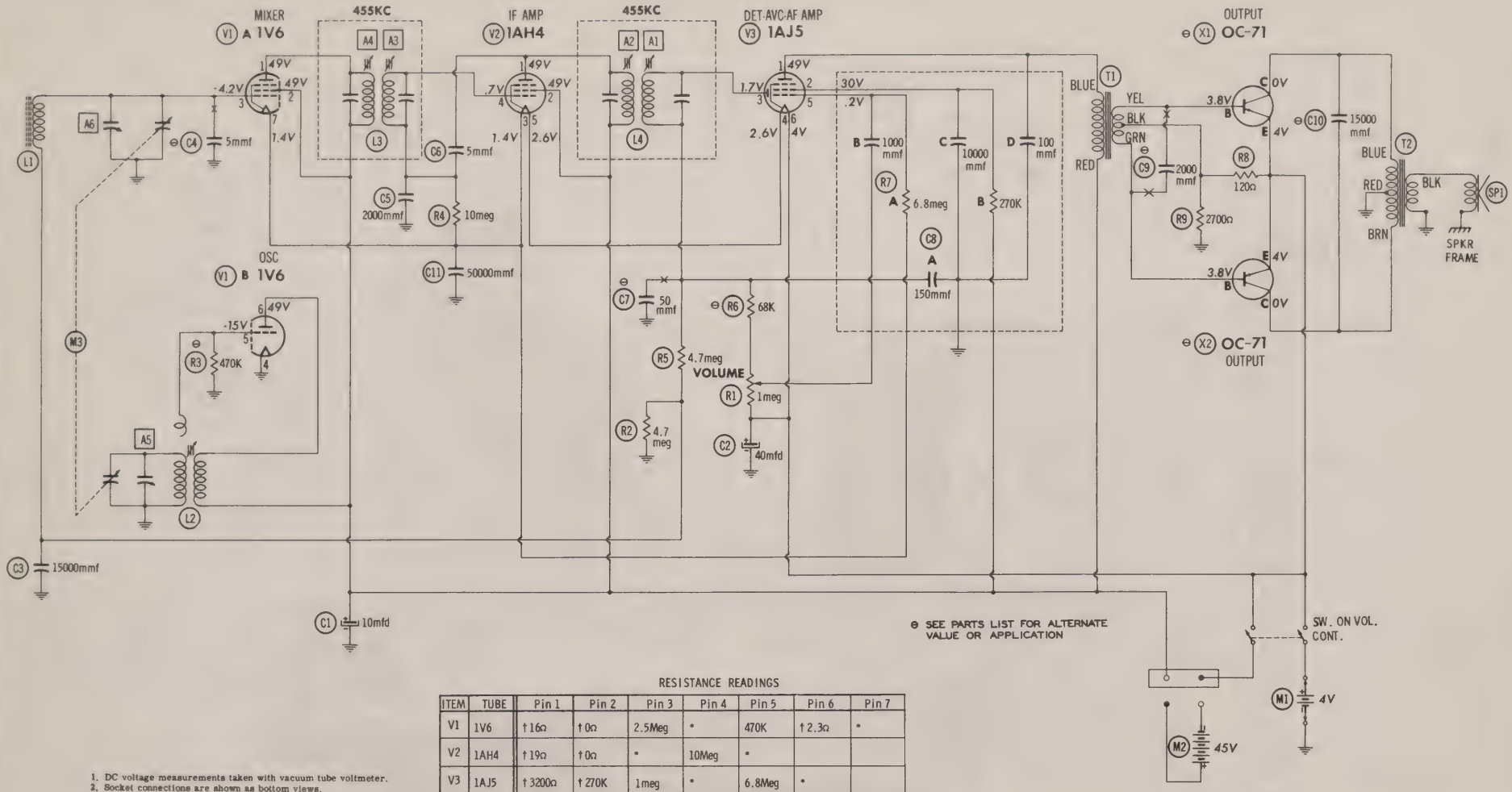
ITEM No.	PART NAME	FIRESTONE PART No.	NOTES
M3	Tuning Cap.	CV528A-1	2 Gang (15-265MMF, 8-85MMF)
	Case	H600-1	Less cover and handle (specify color)
	Cover	H528-2	Case (specify color)
	Handle	H528-3	Handle (specify color)
	Knob	H530	On-off-volume
	Knob	H529	Tuning



CHASSIS BOTTOM VIEW

FIRESTONE
MODEL 4-C-29

SET 336 FOLDER 5



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	1V6	†16Ω	†0Ω	2.5Meg	•	470K	†2.3Ω	•
V2	1AH4	†19Ω	†0Ω	•	10Meg	•		
V3	1AJ5	†3200Ω	†270K	1meg	•	6.8Meg	•	
		BASE	EMITTER	COLLECTOR				
X1	OC-71	80Ω 150Ω	†0Ω	10Ω				
X2	OC-71	80Ω 150Ω	†0Ω	10Ω				

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

• DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE.
† MEASURED FROM POSITIVE SIDE OF C1.
‡ MEASURED FROM POSITIVE SIDE OF C2.
DUAL READING INDICATES REVERSAL OF METER LEADS.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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HARMAN-KARDON MODEL C300

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L. F. D'ANGELO JR.
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DENVER, COLORADO

HARMAN-KARDON
MODEL C300

HARMAN-KARDON
MODEL C300

TRADE NAME	Harman-Kardon Model C300
MANUFACTURER	Harman-Kardon, Inc., 520 Main St., Westbury, L. I., N. Y.
TYPE SET	AC Operated Audio Amplifier
TUBES (Eight)	Types 12AT7 Preamplifier, 12AT7 AF Amplifier, 12AT7 AF Amp-Phase Inverter, 12AU7 Driver, (2) 5881 Output, (2) 5Y3GT Rectifier
POWER SUPPLY	105-125 Volts AC - 60 Cycles RATING 1.03 Amp. @ 117 Volts AC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	Preamplifier	12AT7	
V2	AF Amplifier	12AT7	
V3	AF Amp. -Phase Inv.	12AT7	
V4	Driver	12AU7	

ITEM No.	USE	TYPE	NOTES
V5	Output	5881	
V6	Output	5881	
V7	Rectifier	5Y3GT	
V8	Rectifier	5Y3GT	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Harman-Kardon PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	40	500	JE371201	AFH2-69	B050	FP474	TMD-61	S-300	TVL-1820
C2A	■20	450	JE371046		C159	FP437	TMD-77	D-370	R2288*
B	▲20	450					TD-20-450	FM-4520	
C	▲100	100							
C3A	▲20	450	JE371047	AFH2-69	B050	FP434	TMD-61	Q-030	TVL-4760
B	▲20	450							
C4A	250	50	JE371049						R2289*
B	250	50							

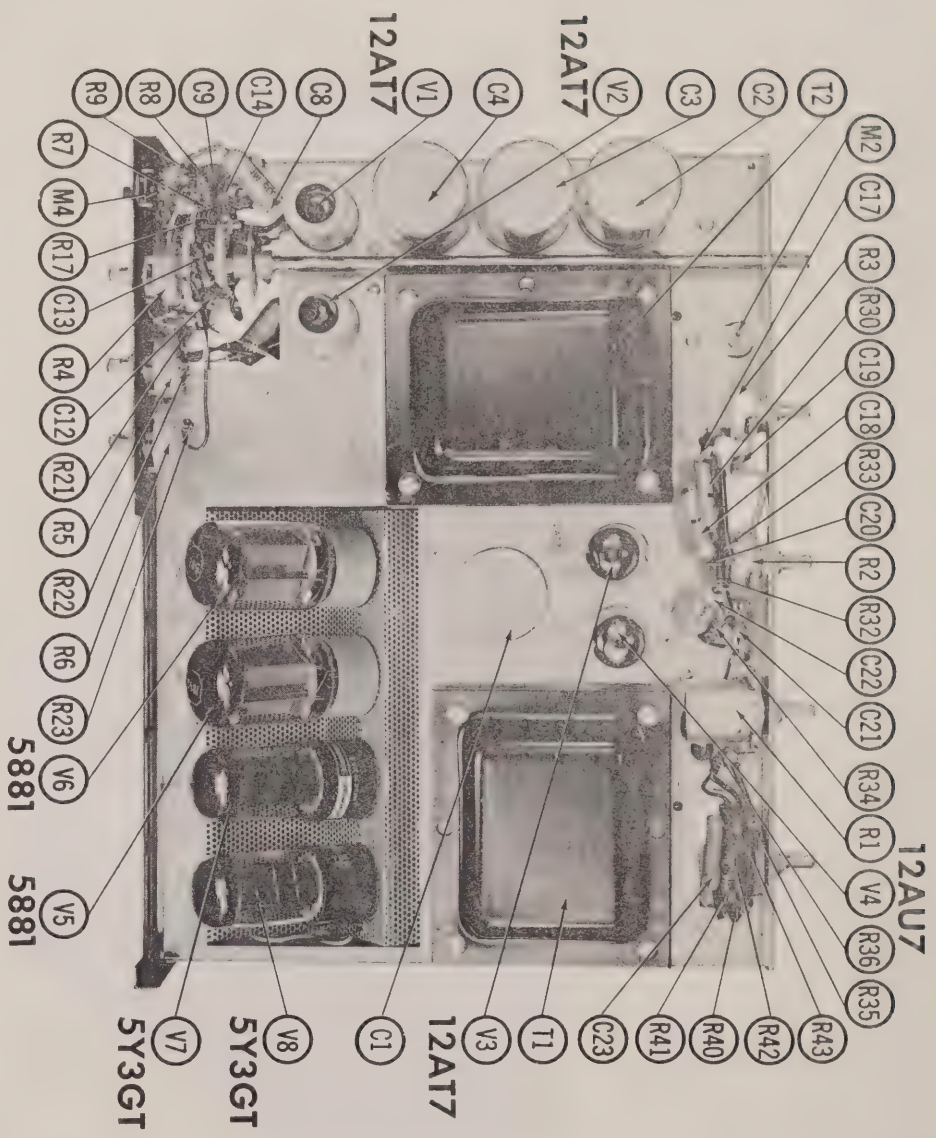
* Non catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	Harman-Kardon PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C5	.05	200		BPD-05	DF-503	CUB2S5		PT415	2TM-S5	
C6	4700			SI4700	D6-472	TP63	GP2-333-472	UC-5247	5GA-D47	
C7	4700			SI4700	D6-472	TP63	GP2-333-472	UC-5247	5GA-D47	
C8	.05	200		BPD-05	DF-503	CUB2S5		PT415	2TM-S5	
C9	.05	200		BPD-05	DF-503	CUB2S5		PT415	2TM-S5	
C10	1000			SI1000	D6-102	TP52	GP2L-102	UC-521	5GA-D1	
C11	1000			SI1000	D6-102	TP52	GP2L-102	UC-521	5GA-D1	
C12	1000			SI1000	D6-102	TP52	GP2L-102	UC-521	5GA-D1	
C13	2200			SI2200	D6-222	TP57	GP2-333-222	UC-5222	5GA-D22	
C14	270			SI270	D6-271	TP41	GP2K-271	UC-5327	5GA-T27	
C15	.05	400		BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C16	.05	400		BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C17	10000			SI10000	D6-103	TP67	GP2-333-103	DC511	5HK-S1	
C18	10000			SI10000	D6-103	TP67	GP2-333-103	DC511	5HK-S1	
C19	270			SI270	D6-271	TP41	GP2K-271	UC-5327	5GA-T27	
C20	4700			SI4700	D6-472	TP63	GP2-333-472	UC-5247	5GA-D47	
C21	2200			SI2200	D6-222	TP57	GP2-333-222	UC-5222	5GA-D22	
C22	.02	200		BPD-02	DF-203	CUB2S2	817-02	PT412	2TM-S2	
C23	10000			SI10000	D6-103	TP67	GP2-333-103	DC511	5HK-S1	
C24	.02	200		BPD-02	DF-203	CUB2S2	817-02	PT412	2TM-S2	
C25	10			BPD-00001	DD-100	G018	831-100	UC-541	5GA-Q1	
C26	.1	400		P488N-1	DF-104	CUB4P1		PT401	4TM-P1	
C27	.25	400		P488N-25		CUB4P25		PT4025	4TM-P25	
C28	.25	400		P488N-25		CUB4P25		PT4025	4TM-P25	
C29	.05	400		BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C30	.05	400		BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C31	.1	200		P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C32	47			BPD-000047	DD-470	G033	831-470	UC-5447	5GA-Q47	
C33	.05	600		BPD-05	DF-503	CUB6S5		PT615	6TM-S5	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	Harman-Kardon PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	1Meg	½	RV371191					Loudness & Switch-Tap ⓐ 350K & 700K
R2A	1Meg	½	RV371190	AB-70	A47-1Meg-Z	Q13-137	U53	Bass
B	Shaft		Not Req.	AK-4	KSS-3	Not Req.	Not Req.	Attach to R2A
R3A	1Meg	½	RV371190	AB-70	A47-1Meg-Z	Q13-137	U53	Treble
B	Shaft		Not Req.	AK-4	KSS-3	Not Req.	Not Req.	Attach to R3A
R4A	500K	½	RV371031	AB-59	A47-500K-S	Q11-133	U50	Tuner Level
B	Shaft		Not Req.	AK-4	KSS-3	Not Req.	Not Req.	Attach to R4A
R5A	500K	½	RV371031	AB-59	A47-500K-S	Q11-133	U50	Aux. 1 Level
B	Shaft		Not Req.	AK-4	FKS-½	Not Req.	Not Req.	Attach to R5A
R6A	500K	½	RV371031	AB-59	A47-500K-S	Q11-133	U50	Aux. 2 Level
B	Shaft		Not Req.	AK-4	KSS-3	Not Req.	Not Req.	Attach to R6A

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Harman-Kardon PART No.	IRC PART No.	
R7	220K			BTS-220K	
R8	27K			BTS-27K	
R9	180K			BTS-180K	
R10	47K			BTS-47K	
R11	270K			BTS-270K	Note 1
R12	470Ω			BTS-470	Note 2
R13	1Meg			BTS-1Meg	
R14	270K			BTS-270K	
R15	1000Ω			BTS-1000	Note 3
R16	68K			BTS-68K	
R17	33K			BTS-33K	Note 4
R18	470K			BTS-470K	
R19	270K			BTS-270K	
R20	33K			BTS-33K	
R21	24K 5%			BTS-24K 5%	Note 5
R22	24K 5%			BTS-24K 5%	Note 5
R23	24K 5%			BTS-24K 5%	Note 5
R24	2.2Meg			BTS-2.2Meg	
R25	470K			BTS-470K	
R26	4700Ω			BTS-4700	
R27	470K			BTS-470K	
R28	150K			BTS-150K	
R29	390Ω			BTS-390	
R30	1Meg			BTS-1Meg	
R31	100K			BTS-100K	
R32	100K			BTS-100K	
R33	10K			BTS-10K	
R34	27K			BTS-27K	Note 5
R35	68K			BTS-68K	
R36	27K			BTS-27K	Note 5
R37	10K			BTS-10K	
R38	10K	2		BTB-10K	
R39	100K			BTS-100K	
R40	27K			BTS-27K	
R41	47K			BTS-47K	

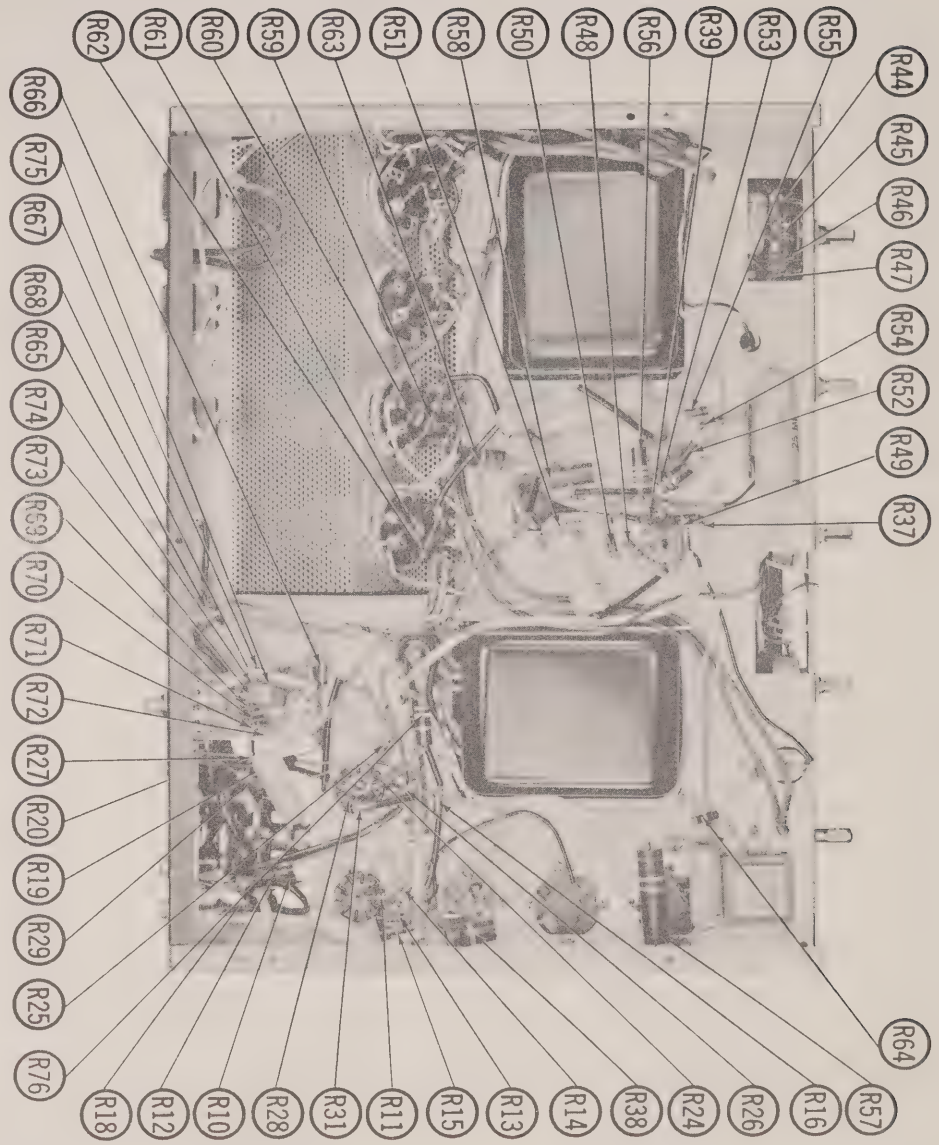
ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Harman-Kardon PART No.	IRC PART No.	
R42	100K			BTS-100K	
R43	270K			BTS-270K	
R44	100K			BTS-100K	
R45	47K			BTS-47K	
R46	27K			BTS-27K	
R47	12K			BTS-12K	
R48	470K			BTS-470K	
R49	47K			BTS-47K	
R50	3300Ω			BTS-3300	
R51	47K			BTS-47K	
R52	1Meg			BTS-1Meg	
R53	47K	1		BTA-47K	
R54	560Ω			BTS-560	
R55	1Meg			BTS-1Meg	
R56	47K	1		BTA-47K	
R57	12K	2		BTB-12K	
R58	6800Ω	2		BTB-6800	
R59	1000Ω			BTS-1000	
R60	100K			BTS-100K	
R61	100K			BTS-100K	
R62	1000Ω			BTS-1000	
R63	120Ω	2		BTB-120	
R64	100K			BTS-100K	
R65	33K			BTS-33K	
R66	1000Ω			BTS-1000	
R67	12K			BTS-12K	
R68	24K 5%			BTS-24K 5%	Note 5
R69	100K			BTS-100K	
R70	270K			BTS-270K	
R71	470K			BTS-470K	
R72	.07Ω				Note 6
R73	.27Ω			BW½-.27	
R74	.27Ω			BW½-.27	
R75	.27Ω			BW½-.27	
R76	39Ω	1		BTA-39	

Note 1: Some versions use 100K in this application.
Note 2: Some versions use 560Ω in this application.
Note 3: Some versions use 1500Ω in this application.
Note 4: Some versions use 68K in this application.
Note 5: Some versions use 22K in this application.
Note 6: Special length of resistance wire.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	Harman-Kardon PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC ⓐ 1.03A	750VCT ⓐ .116A	5VAC ⓐ 4A	6.3VAC ⓐ 2.55A SEC. 4 24VAC ⓐ .150A	FT371028					

CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	Harman-Kardon PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	6700Ω	16Ω tap ② 8Ω tap ③ 4Ω	FT371029 ①						① Screen taps ④ 32ΩCT

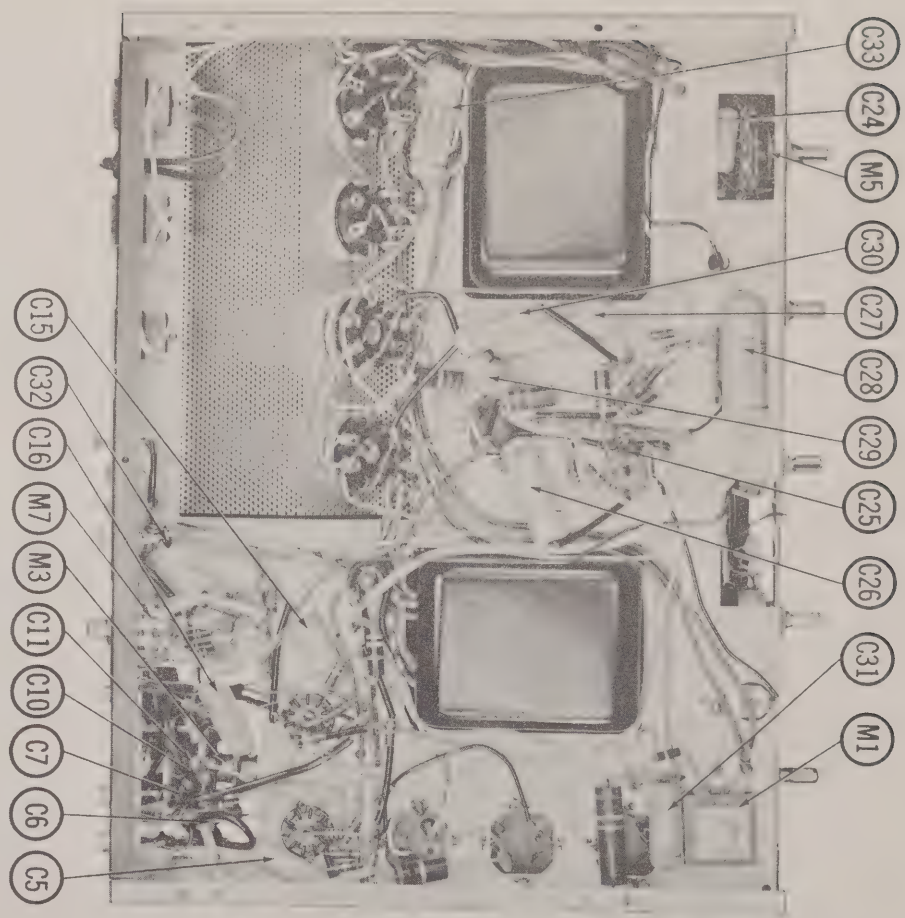
SELENIUM RECTIFIER

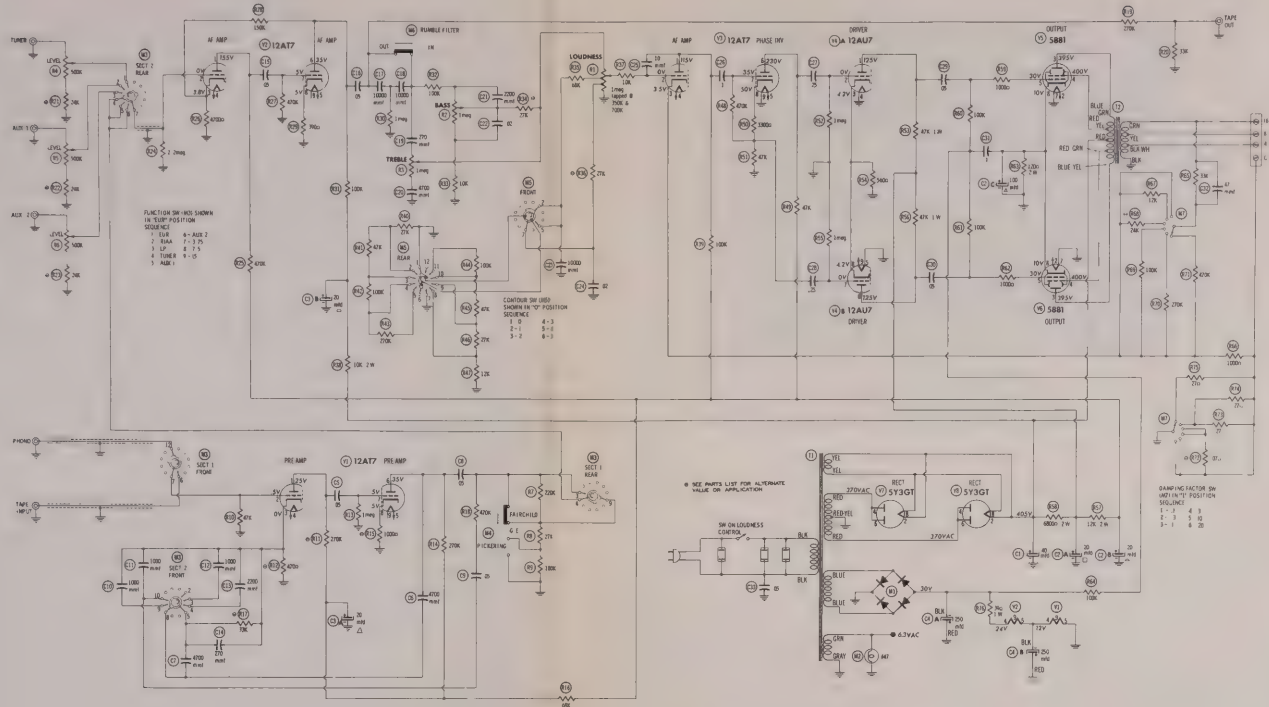
ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	Harman-Kardon PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	
M1	.150A	Z371041	1015	A1B	B26D	M1B1E1G	154B	

MISCELLANEOUS

ITEM No.	PART NAME	Harman-Kardon PART No.	NOTES
M2	Dial Light		#47
M3	Switch	ER371326	Selector (Rotary, Wafer Type)
M4	Switch	ES371052	Phono Selector (3 Position-Slide Type)
M5	Switch	ER371192	Contour (Rotary, Wafer Type)
M6	Switch		Rumble Filter (SPST-Slide Type)
M7	Switch	ER371057	Damping (2 Pole-6 Position; Rotary, Wafer Type)
	Knob	P20778	Control (5 used)

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AT7	1.1MEG	47K	470Ω	12Ω	0Ω	1.2MEG	1MEG	100Ω	NC
V2	12AT7	1.4MEG	220K	470Ω	76Ω	12Ω	1.1MEG	470K	390Ω	NC
V3	12AT7	1.2MEG	11K	220Ω	1Ω	1Ω	1.1MEG	51K	50K	0Ω
V4	12AU7	5.5SK	1MEG	960Ω	0Ω	0Ω	135K	1MEG	560Ω	1Ω
V5	5881	TP	1Ω	1.14ΚΩ	1.1Ω	220K	TP	0Ω	12Ω	
V6	5881	TP	1Ω	1.14ΚΩ	1.1Ω	220K	TP	0Ω	12Ω	
V7	5Y3GT	NC	16K	NC	95Ω	NC	95Ω	NC	16K	
V8	5Y3GT	NC	16K	NC	12Ω	NC	100Ω	NC	16K	

1. MEASURED FROM PIN 2 OF V8
NC NO CONNECTION
TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter.
2. AC voltages measured at 1000 ohms per volt.
3. Socket connections are shown as bottom view.
4. Measured in ohms with meter pin 1 minimum megohm scale.
5. Line to be at the nominal 117 volts voltage setting.
6. Voltage readings may vary as much as 20% due to possible variation of ± 5% in line and instrument readings.
7. All controls at max. (cw) position except as indicated.

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*TRADE MARK

HYDE PARK MODEL 24T70M (Ch. C2001)

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HYDE PARK MODEL 24T70M (Ch. C2001)

TRADE NAME	Hyde Park Model 24T70M (Ch. C2001)
SUPPLIER	Macy's Dept. Store, New York City, N.Y.
TYPE SET	Television Receiver
TUBES	Fifteen
POWER SUPPLY	110-120 Volts AC - 60 Cycle RATING 1.22 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)

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HYDE PARK MODEL 24T70M (Ch. C2001)

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L. F. BLANKENSHIP
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DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 6 push-on type control knobs from side panel of cabinet.

2. Remove 5 wood screws and 1 metal screw. Remove rear cover.

3. Disconnect speaker leads, picture tube socket, HV lead and yoke leads.

4. Remove 2 wood screws holding AC interlock-antenna bracket.

5. Remove 3 chassis bolts and 2 wood screws from 2 chassis brackets at the top of chassis.

6. Remove chassis.

7. Remove 2 speaker nuts. Remove speaker.

MODEL	CHASSIS
24T70M	C2001

HYDE PARK MODEL 24T70M (Ch. C2001)

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the VHF tuner oscillator circuit may be accomplished by removing the channel selector and fine tuning knobs.

PICTURE TUBE SAFETY GLASS CLEANING

Remove 5 wood screws holding plastic molding at top edge of the safety glass. Remove molding and safety glass. Use extreme caution when removing safety glass.

SERVICE ADJUSTMENT LOCATION

See tube placement chart on page 5.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For adjustment of the horizontal oscillator it is necessary to remove the rear cover and supply power to the set. Adjustment is located on the tube side of the chassis. Set the horizontal hold control at the center of its range and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, it is necessary to remove the rear cover and supply power to the set. Adjust the buzz control (R8) for maximum volume and MINIMUM buzz.

CENTERING

Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube, located flush against the deflection yoke. Rotate the two rings around the neck of the tube until the picture is properly centered.

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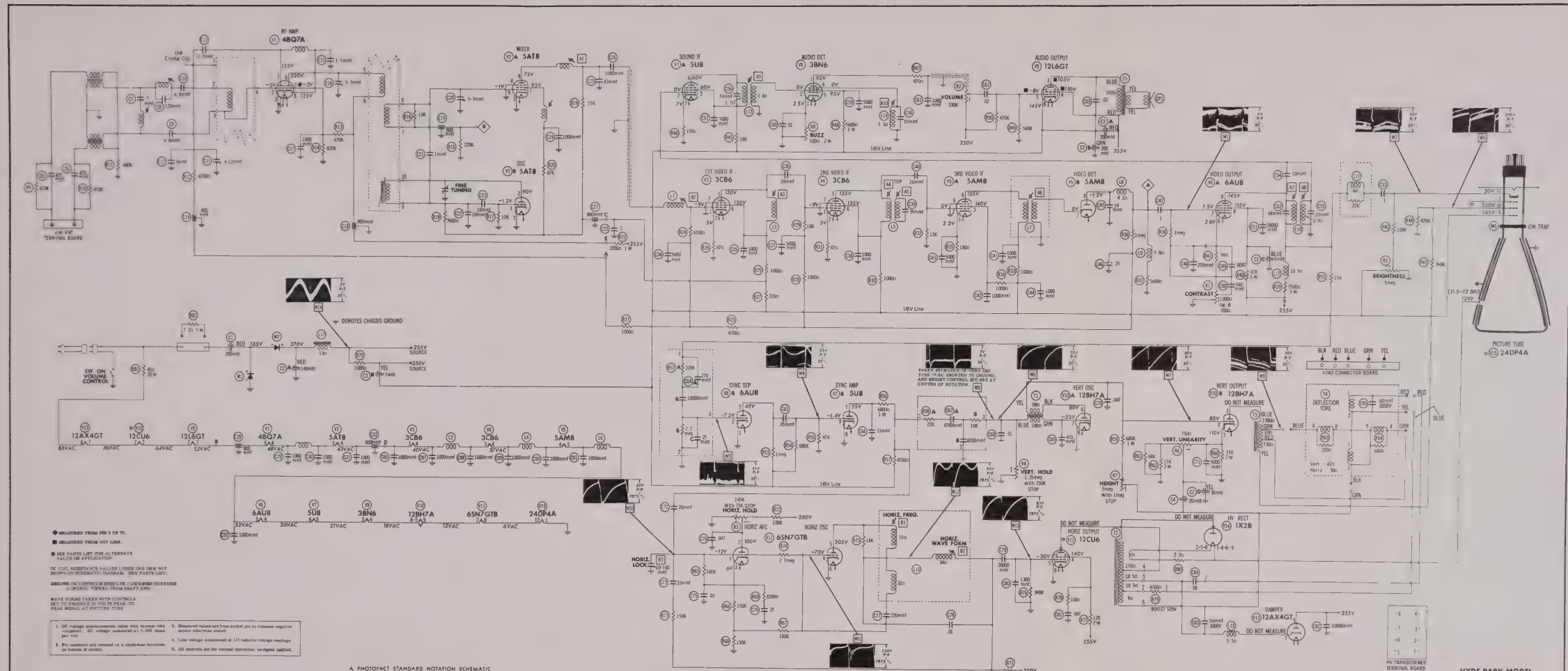
HYDE PARK MODEL 24170M (Ch. C2001)
HYDE PARK MODEL 24170M (Ch. C2001)
A PHOTOFACT STANDARD NOTATION SCHEMATIC
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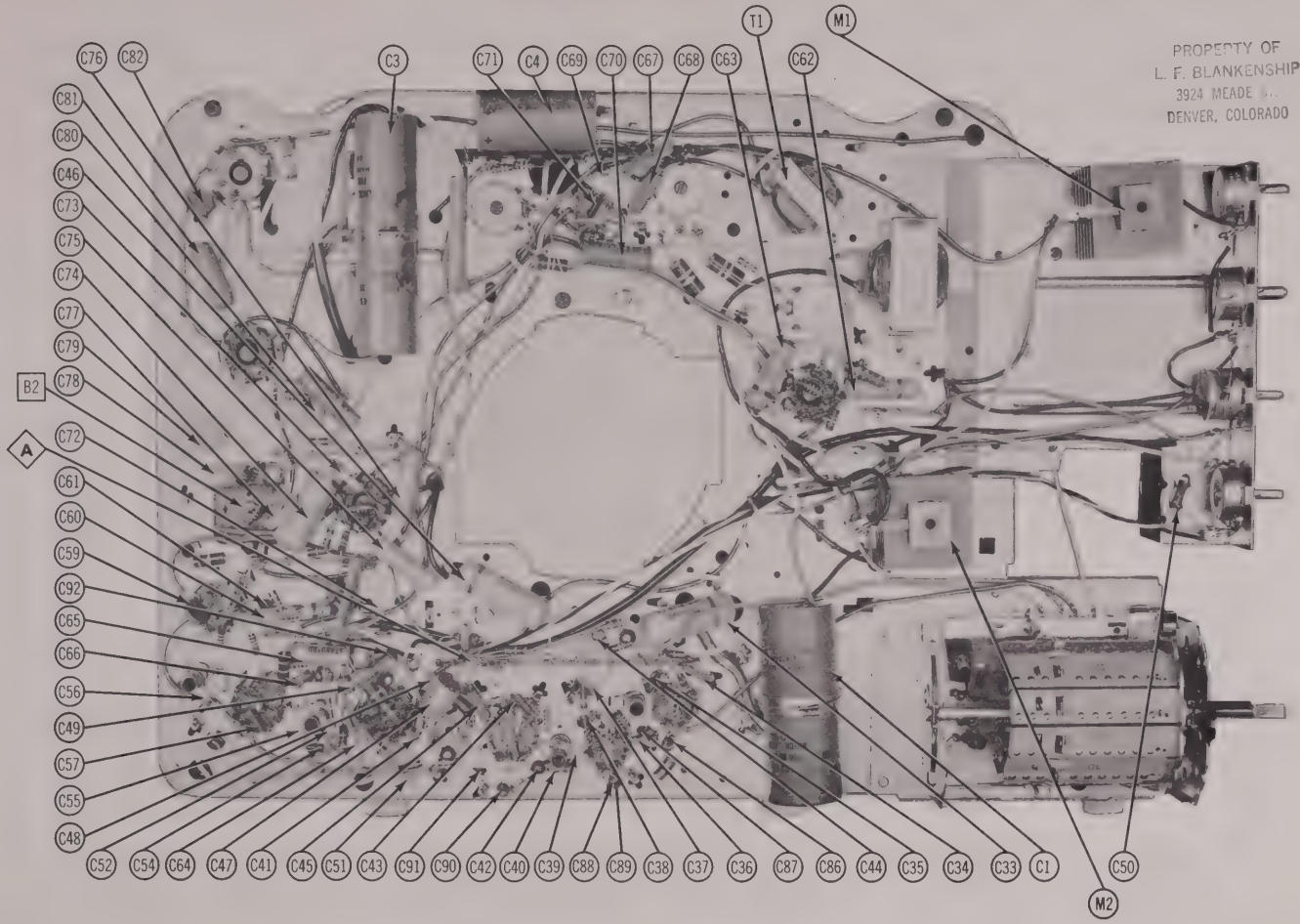
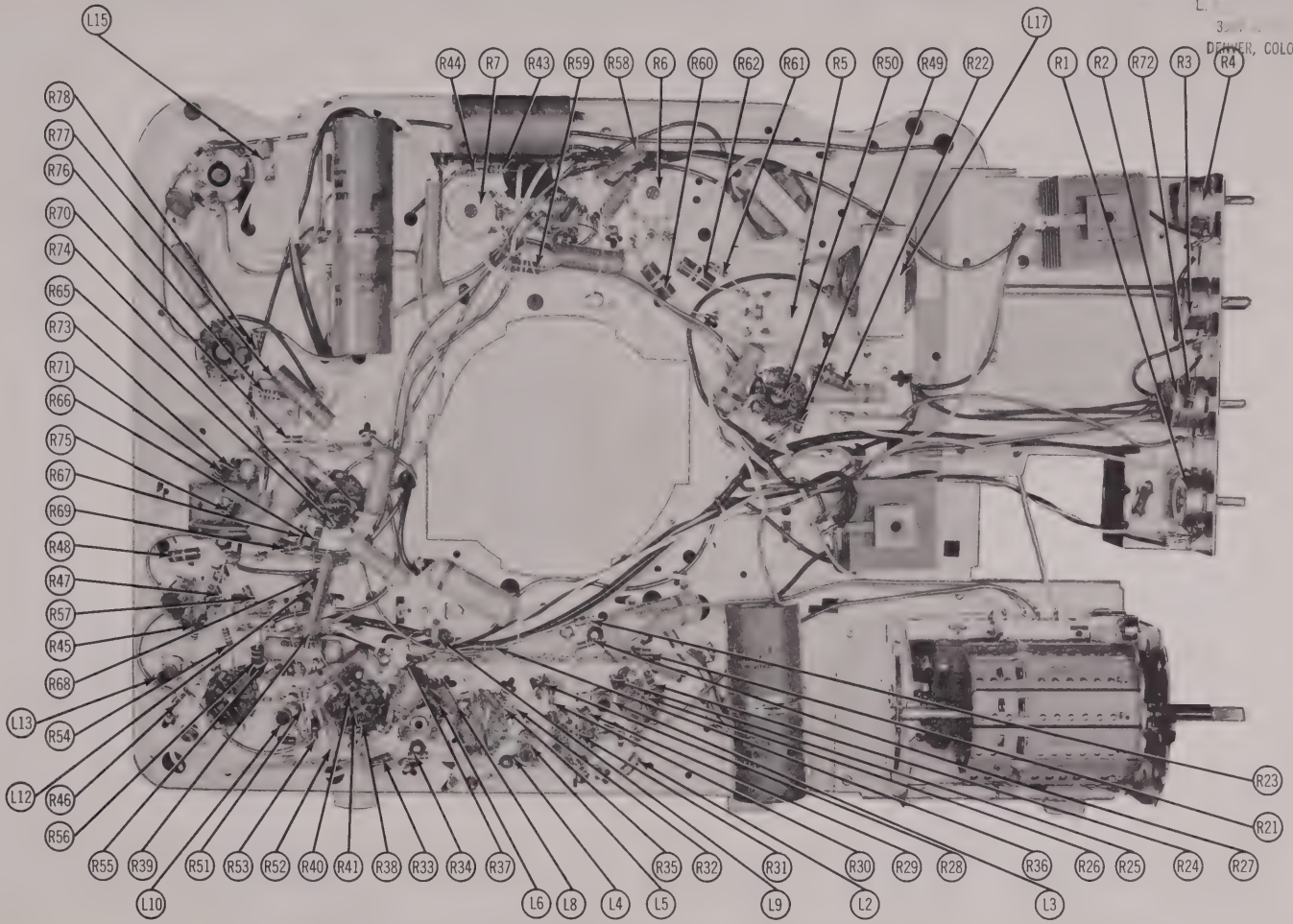
DENOTES CHASSIS GROUND
◆ MEASURED FROM PIN 8 OF V1.
■ MEASURED FROM 145V LINE.
● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM. SEE PARTS LIST.
WAVE FORMS TAKEN WITH CONTROLS SET TO PRODUCE 50 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE
1. DC voltage measurements taken with vacuum tube voltmeter. AC voltage measured at 1,000 ohms per volt.
2. Pin numbers are counted in a clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation; no signal applied.
RF AMP 4BQ7A
MIXER 6AT8
OSC 6AT8
SOUND IF 5U8
AUDIO DET 3BN6
AUDIO OUTPUT 12L6GT
1ST VIDEO IF 3CB6
2ND VIDEO IF 3CB6
3RD VIDEO IF 5AM8
VIDEO DET 5AM8
VIDEO OUTPUT 6AU8
SYNC SEP 6AU8
SYNC AMP 5U8
VERT OSC 12BH7A
VERT OUTPUT 12BH7A
HORIZ AFC 6SN7GTB
HORIZ OSC
HORIZ OUTPUT 12CU6
HV RECT 1X2B
DAMPER 12AX4GT
PICTURE TUBE 24DP4A
ION TRAP
YOKE CONNECTOR BOARD
DEFLECTION YOKE
HV TRANSFORMER TERMINAL BOARD
SW. ON VOLUME CONTROL
VOLUME
BUZZ
FINE TUNING
CONTRAST
BRIGHTNESS
VERT. HOLD
VERT. LINEARITY
HEIGHT
HORIZ. LOCK
HORIZ. HOLD
HORIZ. FREQ.
HORIZ. WAVE FORM
BOOST 520V
DO NOT MEASURE
12AX4GT 88VAC
12CU6 76VAC
12L6GT 64VAC
4BQ7A 52VAC
5AT8 48VAC
3CB6 45VAC
3CB6 40VAC
5AM8 37VAC
6AU8 32VAC
5U8 26VAC
3BN6 21VAC
12BH7A 18VAC
6SN7GTB 12VAC
24DP4A 6VAC
145V Line
255V
250V
270V
135V
90V
75V
60V
30V
12V
6V



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION

HYDE PARK
MODEL 24170M (Ch. C2001)



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

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TUBE PLACEMENT CHART

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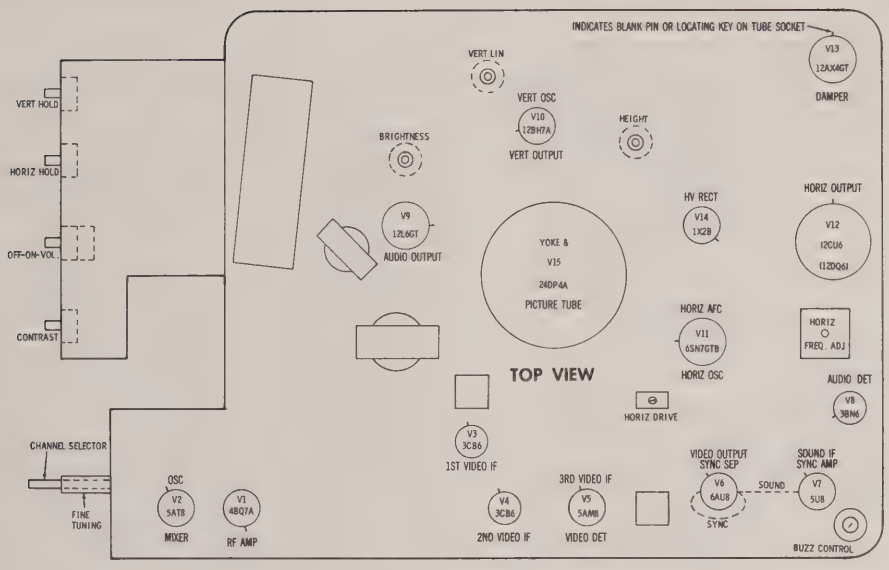


TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce the indicated symptoms. Refer to tube placement chart for location and type of tube.

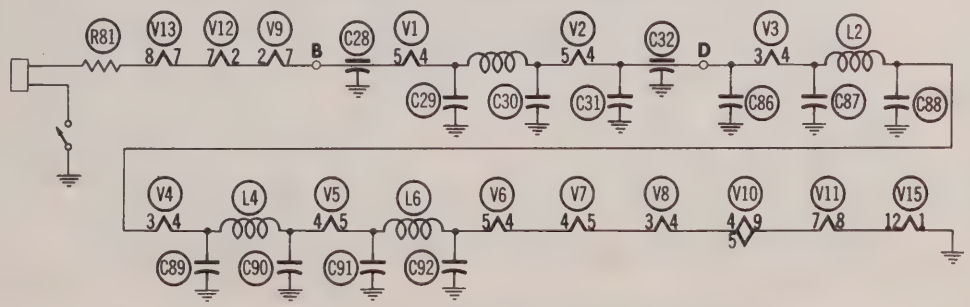
POWER SUPPLY FAILURE
No raster, no sound - **Selenium Rectifiers (M1 & M2)**

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - **V2, V3, V4, V5, V6, V9**
No pic, no sound, has snow - **V1, V2, V3**
No pic, has sound, has raster - **V6, V15**
Has pic, no sound - **V7, V8, V9**

SYNC FAILURE
No vert. sync - **V7, V10**
No horiz. sync - **V7, V11**
No vert. or horiz. sync - **V6, V7**

SWEEP FAILURE
No raster, has sound - **V11, V12, V13, V14, V15**
No vertical deflection - **V10**
Poor vert. linearity or foldover - **V10**
Poor horiz. linearity or foldover - **V11, V12, V13**
Narrow picture - **V11, V12, V13, V14, M1, M2**
Vert. off freq. - **V7, V10**
Horiz. off freq. - **V7, V11**

NOTE: Since this receiver employs tubes used in series filament network, an open filament in any tube in series will cause the set to be inoperative. (See circuit below).



ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use an isolation transformer to protect the test equipment.
The high voltage shock hazard may be eliminated by removing ground connection from pin 8 (cathode) of horizontal output tube (V12).

VIDEO IF ALIGNMENT

Connect the negative lead of a 3 volt bias supply to the ungrounded side of C46. Connect the positive lead to chassis. Two peaks may occur during alignment of the video IF coils. Use the peak with the slug entering the coil from the end nearest the chassis. The sound trap (A5) should be tuned with the slug entering the coil from the end away from the chassis.
Use only enough sweep generator output for useable pattern on scope. If sweep generator has no built in marker, loosely couple a separate marker generator to sweep generator output.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	.01MFD	High side to point Ⓑ. Low side to chassis.	44MC (10MC Swp)	41.25MC 45.75MC	Any unused channel	Vert. Amp. thru detector probe (Fig.1) to pin 5 (plate) of first video IF amp. tube (V3). Low side to chassis.	A1, A2	Adjust A1 and A2 for response curve similar to Fig. 2 with markers in proper position. Remove scope and detector from pin 5 of V3.
2.	"	"	"	41.25MC 42.5MC 45.75MC	"	Vert. Amp. thru 3.3K to point Ⓐ. Low side to chassis.	A3, A4, A5, A6	Adjust for response curve similar to Fig. 3. Adjust A5 for MINIMUM amplitude at 41.25MC. A3 affects the high frequency end of the response curve and A4 affects the low frequency side. A6 affects center of response curve. Adjust A6 for maximum amplitude and MINIMUM tilt.

4.5MC TRAP ALIGNMENT

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
3.	.001MFD	High side to point Ⓐ. Low side to chassis.	Not used	4.5MC (400∿Mod)	Any non-interfering channel	Vert. Amp. thru detector (Fig. 4) to pin 11 (cathode) of picture tube. Low side to chassis.	A7	Rotate contrast control fully clockwise. Adjust A8 completely out of coil, then adjust A7 for MINIMUM 400∿ indication on scope.

SOUND IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Set volume control for normal volume.
Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
4.	.001MFD	High side to point Ⓐ. Low side to chassis.	4.5MC (400∿Mod) (50KC Swp)	4.5MC	Any non-interfering channel	Across secondary of audio output transformer (T5).	A10	Set buzz control (R8) 90 degrees from maximum clockwise rotation. Adjust A10 for maximum 400∿ indication on scope.
5.	"	"	"	"	"	"	A8, A9	Attenuate generator output so that signal level is below the limiting level of the 3BN6 as evidenced by back ground hiss and noise. Adjust A8 and A9 for maximum response on scope.
6.	"	"	Not used	4.5MC (400∿Mod)	"	"	R8	Use high signal generator output and adjust R8 for MINIMUM 400∿ indication on scope.
7.	"	"	4.5MC (400∿Mod) (50KC Swp)	4.5MC	"	"	A10	With volume control at low level retouch A10 for maximum 400∿ indication on scope. Remove test equipment. Connect antenna and tune in weakest station in that area and retouch R8 for MINIMUM buzz and hiss. Tune in stronest TV station in that area and adjust A10 for clearest sound.

VHF TUNER ALIGNMENT

The VHF tuner portion of this receiver has been properly aligned at the factory and is very stable. Alignment of this portion should not be required in the field.

UHF TUNER ALIGNMENT

The UHF Tuner portion has been properly aligned at the factory and is very stable. Alignment of this portion is not recommended in the field.

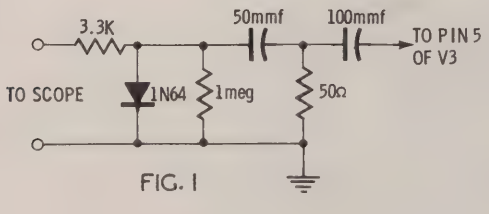


FIG. 1

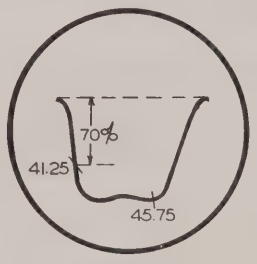


FIG. 2

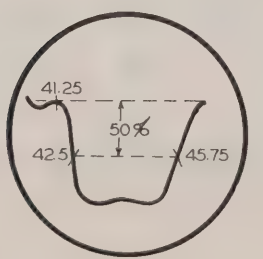


FIG. 3

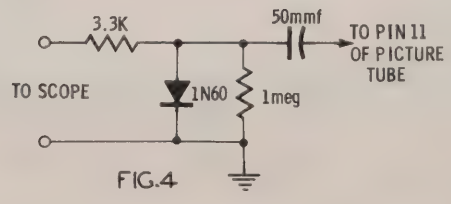
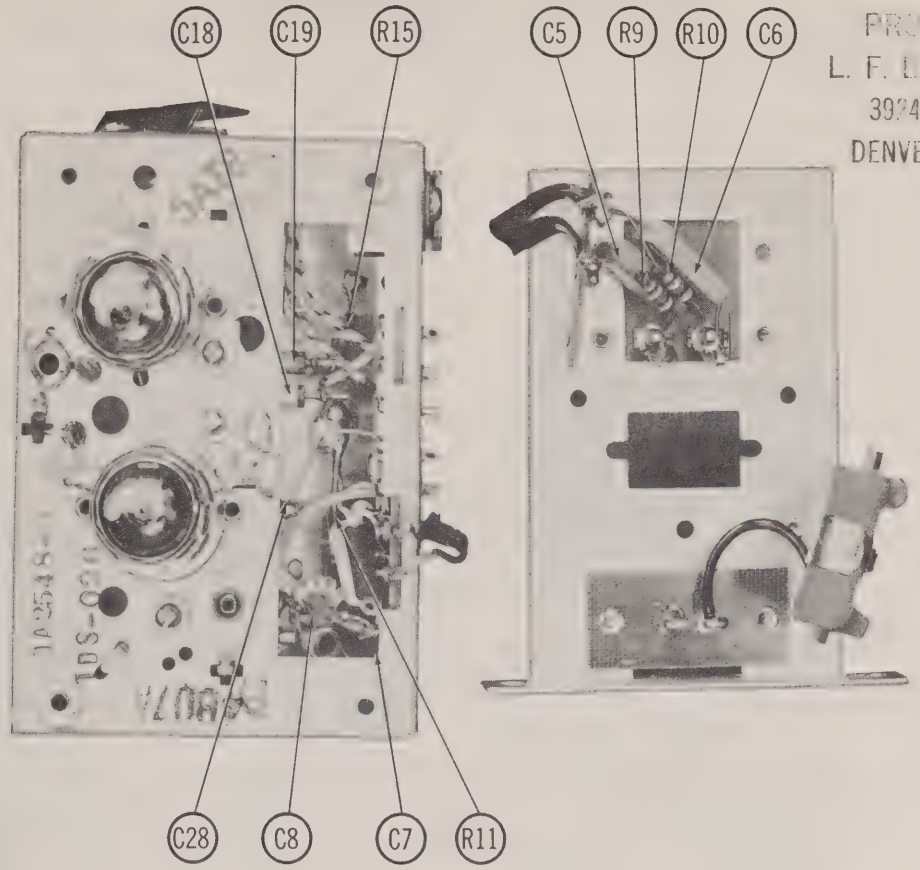
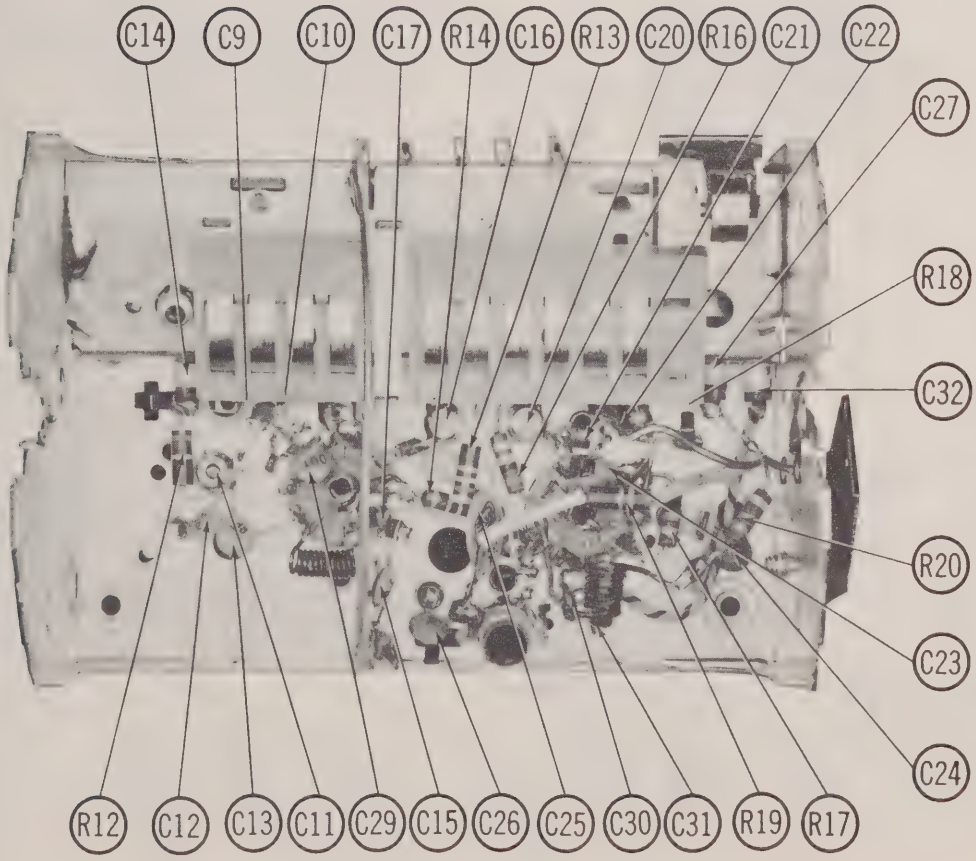


FIG. 4

PROP... ...
L. F. ... ...
3924 MEADE ST.
DENVER, COLORADO



RF TUNER-TOP VIEW

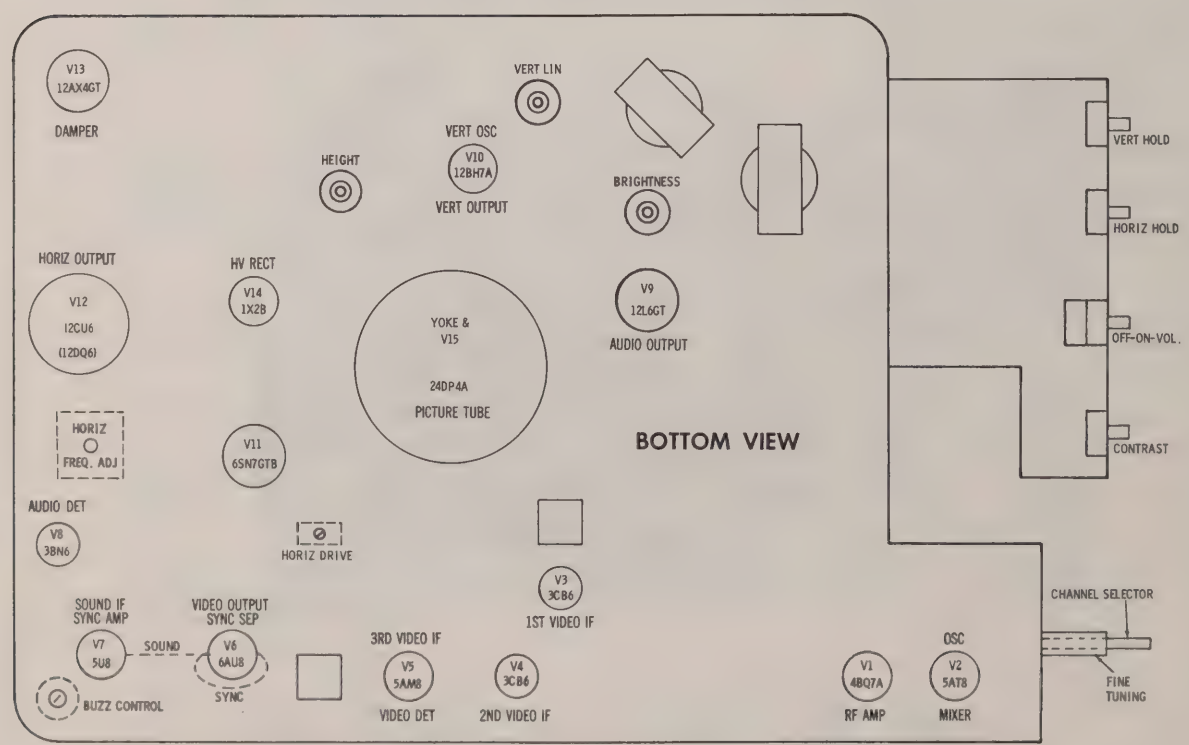


RF TUNER-BOTTOM VIEW

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	4BQ7A	INF	1Meg	0Ω	11Ω	12Ω	†2200Ω	300K	INF	0Ω
V2	5AT8	10K	■ 4000Ω	0Ω	10Ω	11Ω	■15K	■ 47K	0Ω	220K
V3	3CB6	1Meg	47Ω	10Ω	9Ω	■ 1200Ω	■ 1200Ω	0Ω		
V4	3CB6	1Meg	47Ω	9Ω	8Ω	■ 1000Ω	■ 1000Ω	0Ω		
V5	5AM8	180Ω	12K	■ 1000Ω	8Ω	7Ω	■ 1000Ω	.2Ω	5600Ω	0Ω
V6	6AU8	0Ω	2.2Meg	■ 1Meg	6Ω	7Ω	● 140Ω	1Meg	†47K	†7500Ω
V7	5U8	■12K	2.9Ω	■18K	6Ω	5Ω	■18K	150Ω	0Ω	40K
V8	3BN6	● 250Ω	3.4Ω	5Ω	4Ω	■ 5600Ω	5.3Ω	†330K		
V9	12L6GT	TP	15Ω	†245Ω	†54Ω	250K	TP	12Ω	100K	
V10	12BH7A	*1400Ω	● *2.5Meg	7000Ω	4Ω	4Ω	● *2.5Meg	● 500K	0Ω	3Ω
V11	6SN7GTB	800K	†80K	300K	250K	†28K	0Ω	3Ω	2Ω	
V12	12CU6	TP	15Ω	NC	†12K	390K	NC	19Ω	0Ω	TOP CAP *24Ω
V13	12AX4GT	NC	TP	150K	NC	†54Ω	NC	19Ω	22Ω	
V14	1X2B		PINS	1 - 8	HAVE	INF	RESISTANCE			TOP CAP *195Ω
V15	24DP4A	0Ω	0Ω	PIN 6 100K	PIN 10 *390K	PIN 11 ●■ 250K	PIN 12 2Ω			

† MEASURED FROM OUTPUT OF M2.
■ MEASURED FROM 145V LINE.
● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
* MEASURED FROM PIN 3 OF V13.
NC NO CONNECTION.
TP TIE POINT



TUBE PLACEMENT CHART

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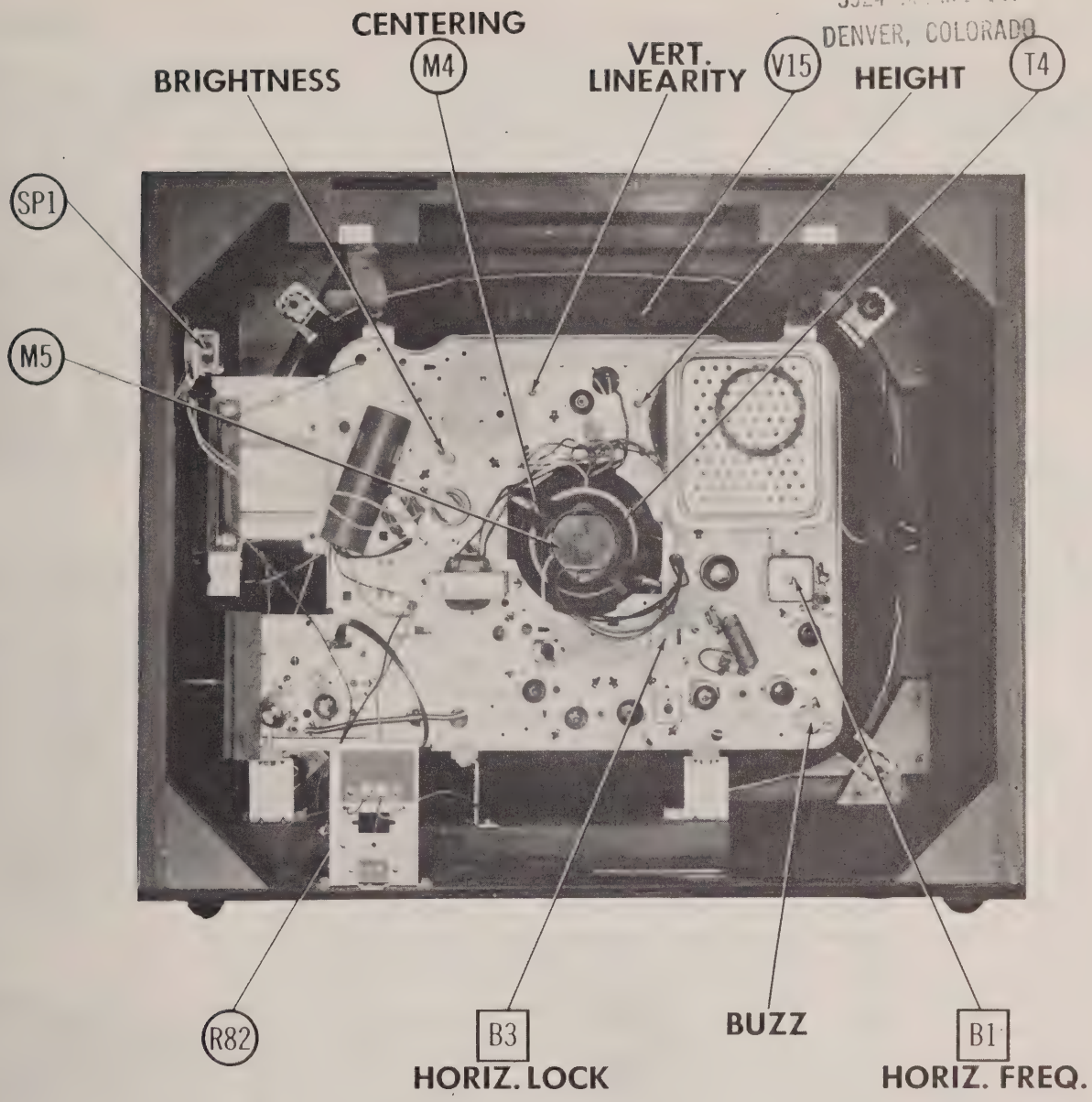
3924
DENVER, COLORADO



CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern.

1. Preset the horizontal lock trimmer (B3) ½ turn from maximum clockwise position.

2. Set the horizontal hold control to its mid-range position and adjust the horizontal frequency slug (B1) until the picture synchronizes horizontally.

3. Connect the vertical amplifier of the oscilloscope thru a 10MMF capacitor to lug 4 of the horizontal oscillator transformer (L16). Connect the low side to chassis. Adjust the horizontal waveform slug (B2) until a waveform similar to Fig. 5 is obtained. While making this adjustment, keep the picture in sync with the horizontal hold control and if necessary, B1 and B3.

4. Remove the scope connection from L16. Turn the horizontal hold control fully counter clockwise. Turn B1 counter clockwise until the picture just loses sync, then turn B1 clockwise until the picture is just ready to pull in sync.

5. Turn the horizontal hold control fully clockwise. The picture should remain in sync. Momentarily remove the signal by switching off channel and back again. Turn the horizontal hold control counter clockwise slowly until the picture just falls into sync. If more than 3 bars are present just before the picture falls into sync, adjust the horizontal lock trimmer (B3) slightly clockwise. If less than 3 bars are present, adjust B3 slightly counter clockwise. Repeat steps 4 and 5 until the effective pull-in range of the horizontal hold control is from 60 to 120 degrees.

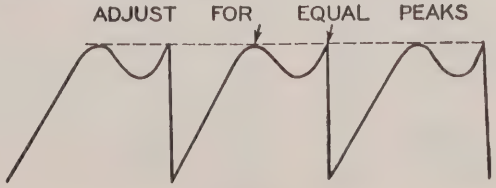


FIG. 5

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BQ7A	
V2	Mixer Oscillator	6AT8	
V3	1st Video IF Amplifier	3CB6	
V4	2nd Video IF Amplifier	3CB6	
V5	3rd Video IF Amplifier- Video Detector	5AM8	
V6	Video Output-Sync Sep.	6AU8	
V7	Sound IF Amplifier- Sync Amplifier	5U8	

ITEM No.	USE	TYPE	NOTES
V8	Audio Detector	3BN6	
V9	Audio Output	12L6GT	
V10	Vert. One-Vert. Output	12BH7A	
V11	Horiz. AFC-Horiz. Osc.	6BN7GTB	
V12	Horiz. Output	12CU6	Note 1
V13	Damper	1X2A(GT	
V14	HV Rectifier	1X2B	

Note 1. 12DQ6 may be used in some versions.

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	Hyde Park PART No.	CBS GENERAL ELECTRIC PART No.	SYLVANIA PART No.		
V15	24DP4A ①	24DP4A ①	24DP4A ②	① Aluminized ② Silver screen "B5"	
	21A1P44 ①	21A1P44 ③	24DP4 ③		
		21A1P4B ③			
		21ALP4	21A1LP4		
			21A1LP4A/B ④	21ALP4A ④	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP	VOLT	Hyde Park PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	300	150	45B365	PRL-075	E210408	WS342	TD-300-200	S-10	TVA-1433
C2A	140	300	45B365	PR4-600	E210401	WQ905	CDD3008	Q-143	TVA-4807
B	200	150						MT-4540	
C	5	300							
D	30	150							
C3A	200	200	45B312	PR2-275	▲E210408	WD345		D-100	R2063 *
B	5	100			▲BR645			MT-3508	
C4	20	450	45B308	PR8450V20	BR3045	TC78	TD-20-450	FM-4520	TVA-1709

* Non-catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	Hyde Park PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.
C5	470	500	47X20B471M	BPD-00047	DD-471	SWS747	811-471	MC345	1FM-T47
C6	470	500	47X20B471M	BPD-00047	DD-471	SWS747	811-471	MC345	1FM-T47
C7	5			NPO-D15	TC2-5R7	Z01	NPOA-050	Z7-555	5TCCB-Y47
C8	10			DI-00012	TC2-010	Z02	G044	NPO-1N	5GA-T12
C9	6.8			NP6-D16.8	TC2-6R8	Z03	NPOA-6R8	Z7-5568	5TCCB-Y68
C10	5.6			NP6-D16.8	TC2-5R6	Z03	NPOA-5R6	Z7-5568	5TCCB-Y68
C11	3-12								
C12	3			NP6-D3	TC2-3R3	Z007	NPOA-030	Z7-558	5TCCB-Y33
C13	3 3			NP6-D3.3	TC2-3R3	Z006	NPOA-3R3		5TCCB-Y33
C14	300								
C15	1.5			NP0-S1.5	TC2-1R5	Z004	NPOA-1R5	Z7-5515	5TCCB-V15
C16	1.5-3				829-3		9125-01-UR5	CT565A	
C17	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C18	800								
C19	800								
C20	5-8				829-3		9125-01-UR5	CT565A	
C21	1			NP0-S1	TC5-1	T503	NP0A-010		5TCCB-V1
C22	10								
C23	10								
C24	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C25	43				TC2-43	Z052	NP01-430		
C26	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C27	800								
C28	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C29	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C30	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C31	1000			BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C32	1800								
C33	.1	400	46A1047	P462J-1	DF-104	CUB4P1		PT401	4TM-P1
C34	1000		47A102	BPD-001	DD-103	K069	801-005	DC-585	5HK-D5
C35	1000		47A330	BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C36	34		47CA30A340J	NP0-E235	TC2-34	T235	NP01-340	ET-5435	5TCC-Q35
C37	5000		47A502	BPD-001	DD-502	K069	801-005	DC-585	5HK-D5
C38	1000		47A330	BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C39	34			NP0-E235	TC2-34	T235	NP01-340		5TCC-Q35
C40	34		47CA30A340J	NP0-E235	TC2-34	T235	NP01-340	ET-5435	5TCC-Q35
C41	1000		47A330	BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C42	1000		47A330	BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C43	5000		47A502	BPD-001	DD-502	K069	801-005	DC-585	5HK-D5
C44	5000		47A168	BPD-001	DD-503	K080	801-005	DC-585	5HK-D5
C45	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C46	10		47A150-11	NP0-S10	TC5-10	T259	NP0A-100	ET-541	5TCC-Q1
C47	300		46A7154J	P388H-35		CUB2F25		PT4035	4TM-P35
C48	.1	150	46A243	P288N-1	DF-104	CUB2P1		PT401	2TM-P1
C49	370		47CA30A371K	NH70	D5-371	T241	GPEK-371	ET-5537	5GA-T37
C50	.0082	300	46A2832K	P398H-909		CUB1ED8		PT1838	6TM-D8
C51	560		47CA25A561K	NI560	D5-561	T248	GPEK-561	DC-5356	5GA-T56
C52	30000		47A363	BPD-08	DD-303	K085	811-08		5HK-D3
C53	68								
C54	.1	400	46A1047	P462J-1	DF-104	CUB4P1		PT401	4TM-P1
C55	10		47CA2010G	NP0-E10	TC2-10	T209	NP0A-100	ET-541	5TCC-Q1
C56	33			47D479	N080-S233				
C57	33			47D479	N080-S233				
C58	9000			47A368	BPD-005	DD-503	K060	811-005	DC-585	5HK-D5
C59	15			47M460					
C60	5000			47A168	BPD-005	DD-503	K060	811-005	DC-585	5HK-D5
C61	5000			47A502	BPD-01	DD-503	CUB4B1	GP3-533-103	PT401	4TM-S1
C62	1800			47A330	BPD-001	DD-102	K069	801-001	DC-531	5HK-D1
C63	.03	300	46A1203J	BPD-03	DF-303	CUB2H3	811-03		PT403	2TM-S3
C64	.03	600	46A2303J	BPD-03	DF-304	CUB3H3	811-03		PT503	3TM-S3
C94A	370						G054	811-371	UC-5537	
B	10000		49A046	9PA-S33	9PC-383		K063	811-01	DC-511	16T-3
C	35						G028	831-350	UC-5425	
C95	.05	300	46A1503J	BPD-05	DF-503		CUB3P5		PT415	2TM-S5
C96	33		47D479	8233	D5-330		GPEK-330		5GA-Q33	
C97A	4700		49A044	4PA-S83	4PC-108		K019	811-0047	DC-5347	4V-5
B	4700						K019	811-0047	DC-5347	
C98	.01	400	46BR603E4							
C99	470		47CA304T5K	1684-00047	D5-471		SR2T47	811-471		MS-347

PARTS LIST AND DESCRIPTIONS

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	Hyde Park PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.
C70	.047	600	46BR473E4	BPD-03	DF-303	CUB4F47		PT4147	4TM-S47
C71	5000		47A168	BPD-005	DD-503	E080	811-005	DC-585	5HK-D5
C73	30		47CA300G	NPO-E030	D5-300	T215	831-300	ET-5443	5TCC-Q3
C73	33		47CA33A330M						
C74	.05	300	46A7304J	P388H-35		CUB3P5		PT4035	3TM-P25
C75	.03	300	46A1203J	BPD-03	DF-303	CUB3H3	811-03	PT413	3TM-S3
C76	.047	600	46BR473L4	BPD-05	DF-503	CUB4B47		PT4147	4TM-B47
C77	220	500	47X20B221K	NPO-E0330	D5-221	T2R5753	811-221		5HK-Q33
C78	.01	600	46C344						
C79	30000		47A363	BPD-03	DD-303	K065	811-03	PT413	5HK-S3
C80	1300	500	47X30B133K	N464-00013		H5D13			5HB-133
C81	.047	400	46BR473L4	BPD-05	DF-503	CUB4B47		PT4147	4TM-B47
C82	10000		47A368	BPD-01	DD-103	K085	811-01	DC-511	5HK-S1
C83	56	3000	47A565		D30-560		5EV-560	DC30456	30GA-Q56
C84	.08	300	46A7083F	P288N-08					3TM-Q8
C85	68	2000			D20-680	V3Q68	5EV-680	DC30468	20GA-Q68
C86	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C87	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C88	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C89	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C90	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C91	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1
C92	1000		47A330	BPD-001	DD-103	K069	801-001	DC-531	5HK-D1

† Items C84A, C84B, C84C, R83A and R83B are combined in one unit.
* Items C87A, C87B, R86A and R86B are combined in one unit.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST ANCE	WATTS	Hyde Park PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	1000Ω	½	35B1233			B1T-10EK, 89E		Contrast - tap ①200Ω
R2A	330K	½	35B1101	B-60-8		Q13-133	TA-334-A	Volume
B	Switch	½	Not Req.	Not Req.		T6-1	UN-38	Attach to R3A
R3A	145K	½	35B1100	TB-35	†A47-75K-8	†Q1L-285	V148	Horiz. Hold with 75K stop
B	Shaft	½	Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R2A
R4A	1 25Meg	½	35B1178	†TB-69	††A47-1Meg-	†††Q1L-127	†††TA16L	Vert. Hold with 390K stop
B	Shaft	½	Not Req.	Not Req.	FS-3 B	Not Req.	Not Req.	Attach to R4A
R5A	5Meg	½	35B1096			Q1T-161	PTA16R	Brightness
B	Shaft	½	Not Req.			TQ	Not Req.	Attach to R5A
R6A	1Meg	½	35B1094	AB-5	A47-750-B	Q1L-105	PTA78IL	Vert. Linearity
B	Shaft	½	Not Req.	AK-18	RM-3	TQ	Not Req.	Attach to R6A
R7A	1Meg	½	35B1096	aAB-56	aA47-1Meg-S	aQ1L-161	aPTA35IL	Height-with 1Meg stop
B	Shaft	½	Not Req.	AK-18	RM-3	TQ	Not Req.	Attach to R7A
R8	100Ω	2	35A1091		19-500		FL-500	Buzz-wire wound

† Connect a 75K resistor in series with the right hand terminal of the control and the lead connecting to the same terminal of the original control (control viewed from shaft end, terminals down).
†† Connect a 270K resistor in series with the left hand terminal of the control and the lead connecting to the same terminal of the original control (control viewed from shaft end, terminals down).
* Connect a 1Meg resistor in series with the right hand terminal of the control and the lead connecting to the same terminal of the original control (control viewed from shaft end, terminals down).

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Hyde Park PART No.	IRC PART No.	
R9	470K		33X30X474K	BTS-470K	
R10	470K		33X30X474K	BTS-470K	
R11	680K			BTS-680K	
R12	4700Ω			BTS-4700	
R13	470K			BTS-470K	
R14	820K			BTS-820K	
R15	330K			BTS-330K	
R16	10K			BTS-10K	
R17	10K			BTS-10K	
R18	3300Ω			BTS-3300	
R19	15K			BTS-15K	
R20	47K			BTS-47K	
R21	1000Ω		33X20X102K	BTS-1000	
R22	2200Ω	1	33X30X222K	BTA-2200	
R23	4700Ω		33X20X472K	BTS-4700	
R24	4700Ω		33X20X472K		
R25	1000Ω		33X20X102K	BTS-1000	
R26	47Ω		33X20X470K	BTS-47	
R27	2250		33X20X225K	BTS-220	
R28	1000Ω		33X20X102K	BTS-1000	
R29	18E		33X20X183K		
R30	1000Ω		33X20X102K	BTS-1000	
R31	47Ω		33X30X470K	BTS-47	
R32	22K		33X20X223K		
R33	1000Ω		33X20X102K	BTS-1000	
R34	1000Ω		33X20X102K	BTS-1000	
R35	18KΩ		33X20X183K	BTS-180	
R36	1Meg		33X20X105K	BTS-1Meg	
R37	560Ω		33X20X561K	BTS-5600	
R38	1Meg		33X20X105K	BTS-1Meg	
R39	7500Ω	5	46AJ258	PWT-7500	
R40	47K	1	33X30X473K	BTA-47K	
R41	56Ω		33X20X560K	BTS-56	
R42	100K		33X20X104K	BTS-100K	
R43	390K		33X20X394K	BTS-390K	
R44	820K		33X20X834K	BTS-820K	
R45	18K		33X20X183K	BTS-18K	
R46	150Ω		33X20X151K	BTS-150	

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Hyde Park PART No.	IRC PART No.	
R47	470Ω		33X20X471K	BTS-470	
R48	5600Ω	1	33X30X562K	BTA-5600	
R49	560K 5%		33X20X564J	BTS-560K 5%	
R50	470K 5%		33X20X474J	BTS-470K 5%	
R51	15K		33X20X153K	BTS-15K	
R52A	230K		†46A046	BTS-220K	
B	2.5Meg			BTS-2.5Meg	
R53	1Meg		33X20X105R	BTS-1Meg	
R54	680K		33X20X684K	BTS-680K	
R55	47K		33X20X473K	BTS-47K	
R56	6800Ω	1	33X30X682K	BTA-6800	
R57	4700Ω		33X20X472K	BTS-4700	
R58A	22K		46A044	BTS-22K	
B	10K			BTS-10K	
R59	680K	1	33X30X684K	BTA-680K	
R60	15K	2	23X40X153K	BTS-15K	
R61	68K		33X20X683K	BTS-68K	
R63	15K	2	23X40X153K	BTS-15K	
R63	330Ω			BTS-330	
R64	8800Ω				
R65	560K		33X20X564J		
R66	150K		33X20X154K		
R67	100K		33X20X104K		
R68	150K		33X20X154K		
R69	8200Ω		33X20X822K		
R70	1000Ω		33X20X102K	BTS-1000	
R71	27K		33X20X273K	BTS-27K	
R72	100K		33X20X104K		
R73	150K		33X20X154K		
R74	2.7Meg		33X20X275K		
R75	10K		33X20X103K		
R76	390K		33X20X394K		
R77	12K	3	23A097		
R78	100Ω		33X20X101K		
R79	4700Ω		33X20X472K		
R80	2.2Ω			BW-2.2	
R81	45Ω	30	24A1046		
R82	7.2Ω	5	23J101	FR-7.5	

† Items R52A, R52B, C84A, C84B, C84C are combined in one unit.
* Items R58A, R58B, C87A, C87B are combined in one unit.

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA							
		Hyde Park PART No	Halldorson PART No	Merit PART No	RCA TYPE No	Ram PART No	Stancor PART No	Thordarson PART No	Triad PART No
T1	Vert.Osc. Trans.	35B230	B6704	A-3006		V605	A-8135 *	26A05	A-132Q①
T2	Horiz.Output Trans.	35B231	B6705	RVO-37 *		RJ25 *	A-8263 *	FLY-25 *	D-48 *
T3	Vert. Output Trans.	35C260		F3418 *		V315			
T4	Yoke (90°) Horiz. (110DEG)	53-364 ②		2J807 DF607④	J25D①	Y90F19/43 ④	DY-16A ④	Y-16 ④	Y-41-④
B	Vert.(44MH)								

① Drill one mounting hole(s).
② Includes resistor R78.
③ Includes capacitor C86, resistors R63 and R64.
④ Use original yoke damping network. Jumper terminals #3 and #5.

***HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA**

Use Original Width Coil Unless Replacement Type Is Listed

ORIGINAL TERMINAL CONNECTIONS	Halldorson Replacement Connections	Merit Replacement Connections	RCA Replacement Connections	Ram Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
4	6	5	5	3	6	6	6
5	3	3	7	7	3	3	5
2	5	6	2	5	5	5	3
6	2	2	3	2	2	2	2

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Hyde Park PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T5	3.4K	3-4Ω	35B248	21U01	A-3035	A-3333	28B58	6-12X	

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C. IMP.	Hyde Park PART No.	QUAM PART No.	RCA TYPE No	
SP1	4"	PM	3-4Ω	85C175	4A07	223B1	

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	Hyde Park PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	1st. Video IF	.1Ω		51A1926				
L2	F1. Choke	6Ω		51A282	19-3001		6175	.4 Microhenry
L3	2nd. Video IF	.1Ω		51A1925			6225	
L4	F1. Choke	6Ω		51A283	19-3001		6176	.4 Microhenry
L5	3rd. Video IF	.1Ω		17-4501		TV-123		Includes 41.25MC trap
L6	F1. Choke	9Ω		51A285	19-3000		6175	.4 Microhenry
L7	4th. Video IF	.2Ω	.2Ω	50A554	19-3004 *		TV-125*	6324 *
L8	Series Peaking Coil	4.3Ω		53A307	19-4606		6624	16 Microhenries
L9	Shunt Peaking Coil	9.8Ω		51-3031	19-4600		6124	390 Microhenries
L10A	4.5MC Trap	.8Ω		51A1928				
B	1st. Sound IF	3.9Ω						
L11	Series Peaking Coil	8Ω		51-3029	19-3180 *	TV-184 *	6180 *	180 Microhenries, wound on 33E resistor
L12	Shunt Peaking Coil	10.5Ω		51-3030	19-4605		6126	430 Microhenries
L13	2nd. Sound IF	1.7Ω	3.4Ω	51A1859				
L14	Quadrature Coil	8.3Ω		51A1897			1680	7.5 Microhenries, IRC part #CLA
L15	RF Chokes	5.5Ω		53-545				

* Use adaptor plate.
* Parallel with 22K resistor.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.		REPLACEMENT DATA						NOTES
	PRI	SEC	Hyde Park PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.	Thordarson PART No.	
L16	15Ω	32Ω	50C648	20-1603 *	TV-163 *	6183 *	303B1 *	H-100 *	28B-3 *	Waveform winding -34Ω

* Reverse coil mounting in can.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL CURRENT	D. C. RESISTANCE	INDUCTANCE (@ CURRENT 1000 ⁻⁄₀₀)	Hyde Park PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No
L17	.300A	52Ω	.85 Hy.	96B187	C5040	C-3994	C-3337	28C41	C-32X①

① Drill one new mounting hole.

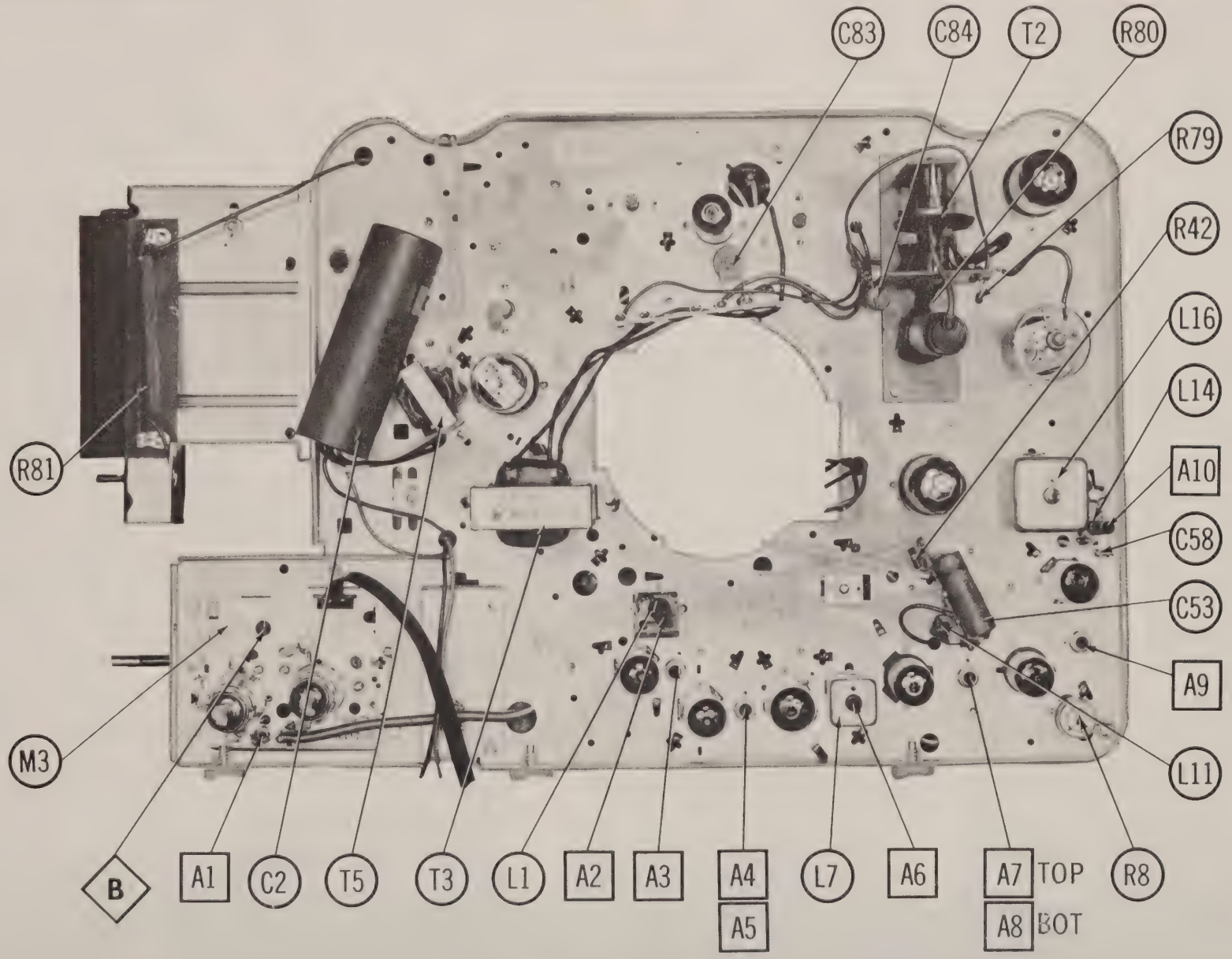
SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	Hyde Park PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	
M1	.300A	37A318	1236A	MR300	68300	504	300	
M2	.200A	37A318	1236A	MR300	68300	504	300	

MISCELLANEOUS

ITEM No.	PART NAME	Hyde Park PART No.	NOTES
M3	Tuner	UD3548	VHF
M4	Centering Device	31B236	
M5	Ion Trap	31B189	
B3	Trimmer Cap.	44A448	Horiz. Lock (20-160MMF)

HYDE PARK MODEL 24170M (Ch. C2001)

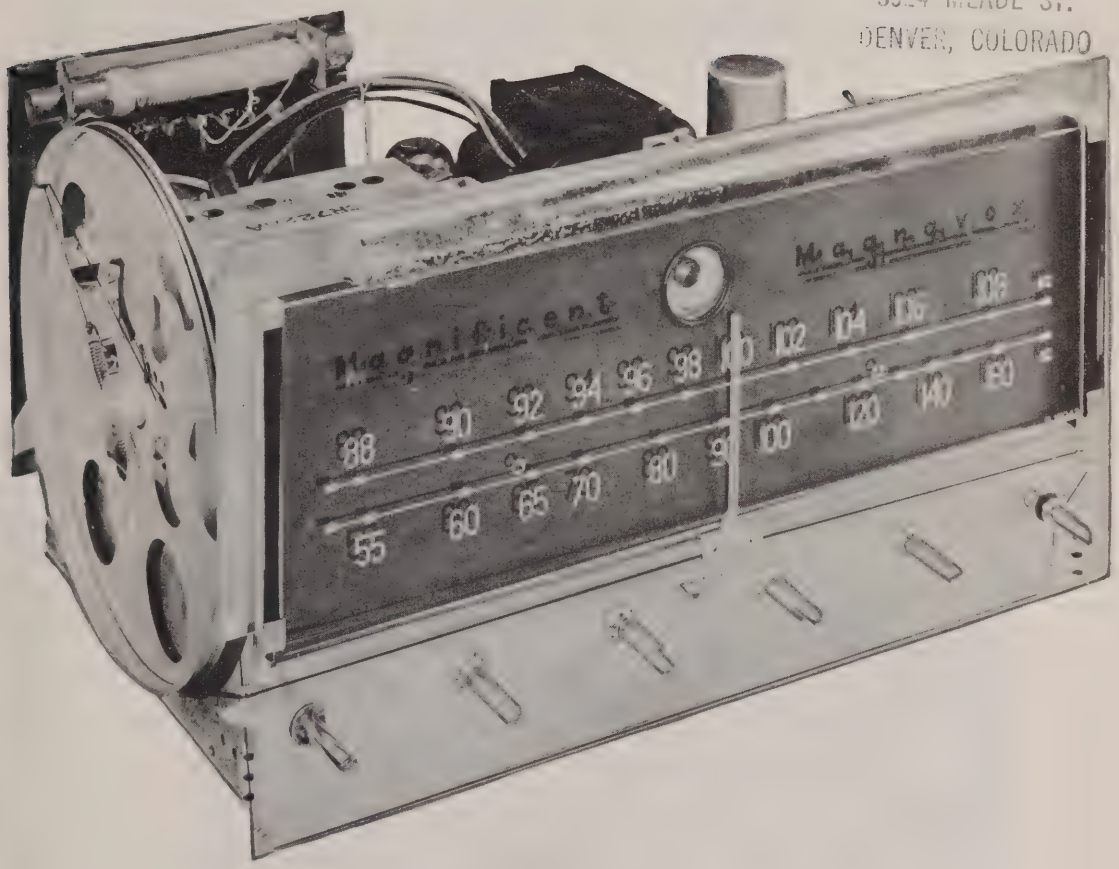


CHASSIS TOP VIEW

PROPERTY OF
LIBRARY
3924 MAIN ST.
DENVER, COLORADO

PROPERTY OF
L. F. BLANKENSHIP
3624 MEADE ST.
DENVER, COLORADO

MAGNAVOX
CHASSIS CR-722



MAGNAVOX
CHASSIS CR-722

TRADE NAME	Magnavox Chassis CR-722		
MANUFACTURER	Magnavox Co., 2131 Bueter Rd., Fort Wayne, Indiana		
TYPE SET	AC Operated FM-AM Superheterodyne Tuner		
TUBES	Ten		
POWER SUPPLY	110-120 Volts AC - 60 Cycles	RATING	.69 Amp. @ 117 Volts AC
TUNING RANGE--BROADCAST	540KC -1620KC	FREQ. MOD.	88MC-108MC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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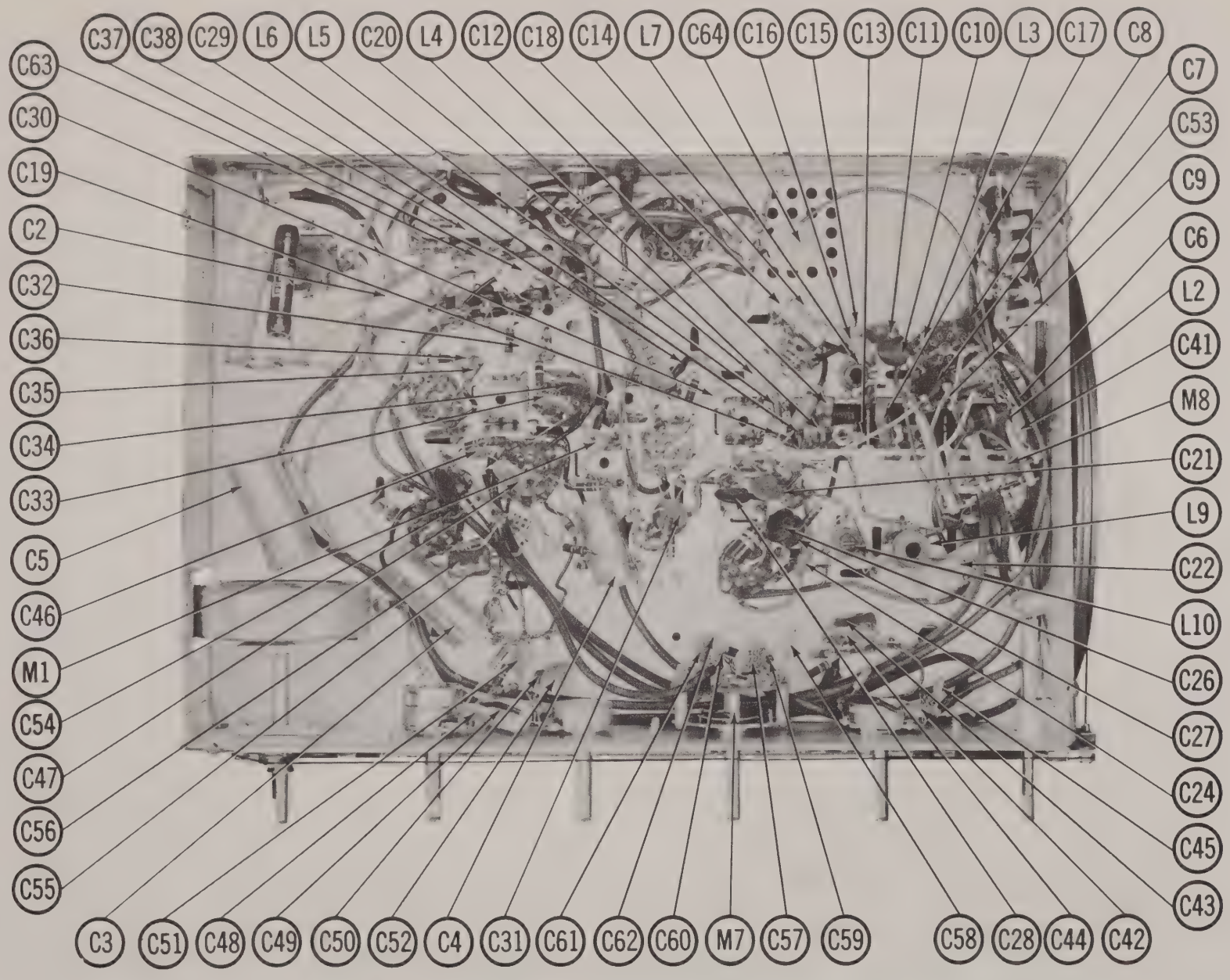
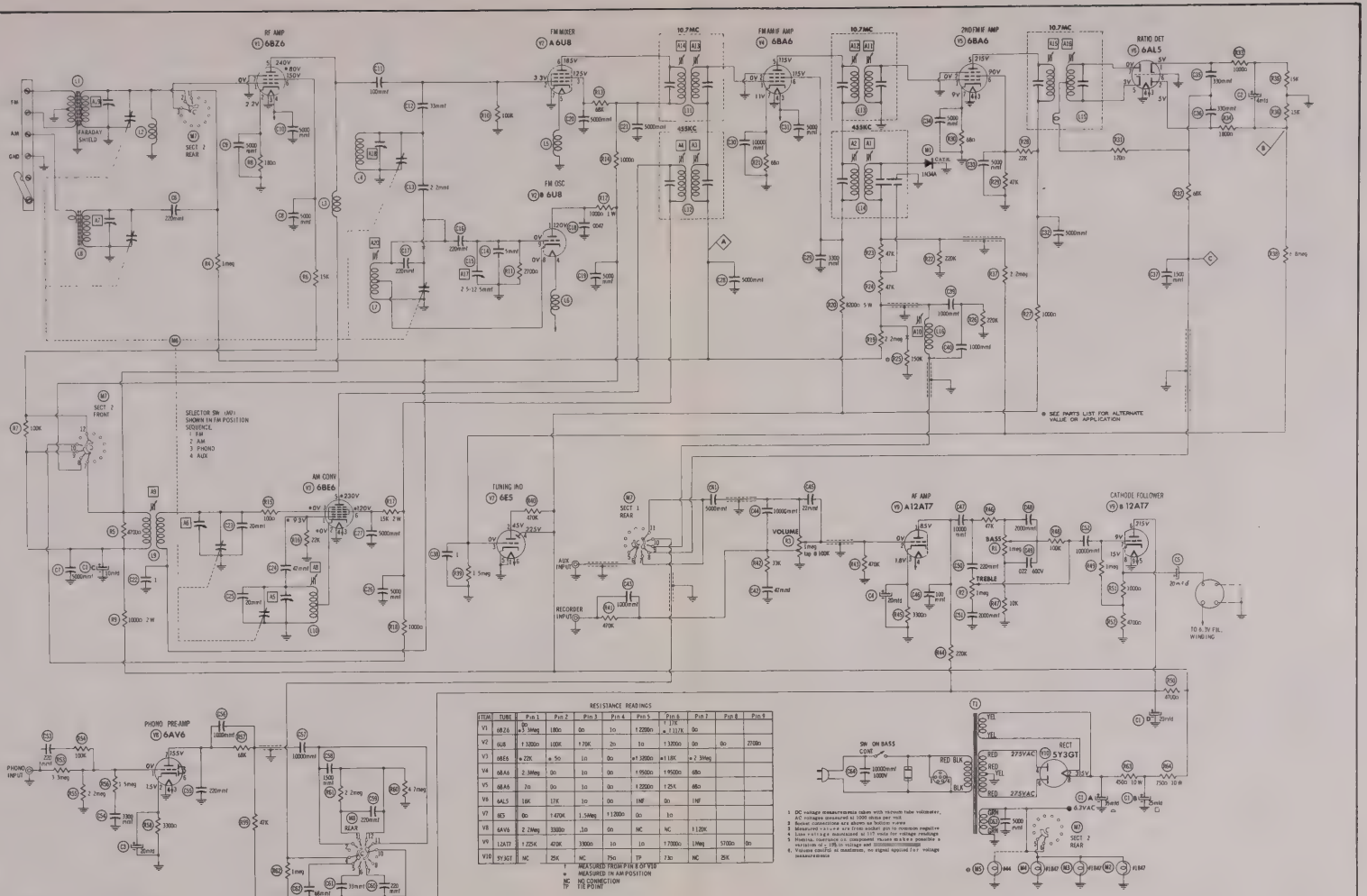


CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BZ6	On ▲3.1Meg	180Ω	0Ω	1Ω	↑220kΩ	↑ 11K ▲ 7.11/K	0Ω		
V2	6U8	↑ 320Ω	100K	↑ 79K	2Ω	1Ω	↑ 320Ω	0Ω	0Ω	270Ω
V3	6BE6	▼ 22K	▲ 50	1Ω	0Ω	▼1.320Ω	▼1.18K	▼ 2.3Meg		
V4	6BA6	2.3Meg	0Ω	1Ω	0Ω	↑ 950Ω	↑ 950Ω	68Ω		
V5	6BA6	7Ω	0Ω	1Ω	0Ω	↑ 220Ω	↑ 25K	68Ω		
V6	6AL5	1.6K	17K	1Ω	0Ω	INF	0Ω	INF		
V7	6E5	0Ω	↑ 470K	1.5Meg	↑ 1200Ω	0Ω	1Ω			
V8	6AV6	2.2Meg	330Ω	.1Ω	0Ω	NC	NC	↑ 120K		
V9	12AT7	↑ 725K	470K	330Ω	1Ω	1Ω	↑ 7700Ω	1Meg	5700Ω	0Ω
V10	5Y3GT	NC	25K	NC	75Ω	TP	73Ω	NC	25K	

↑ MEASURED FROM PIN 8 OF V10
▼ MEASURED IN AM POSITION
NC NO CONNECTION
TP T/E POINT

1. DC voltage measurements taken with vtvm tube voltmeter, DC resistance measurements with 1000 ohms per volt.
2. Across connections are shown as broken wires.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and [illegible]
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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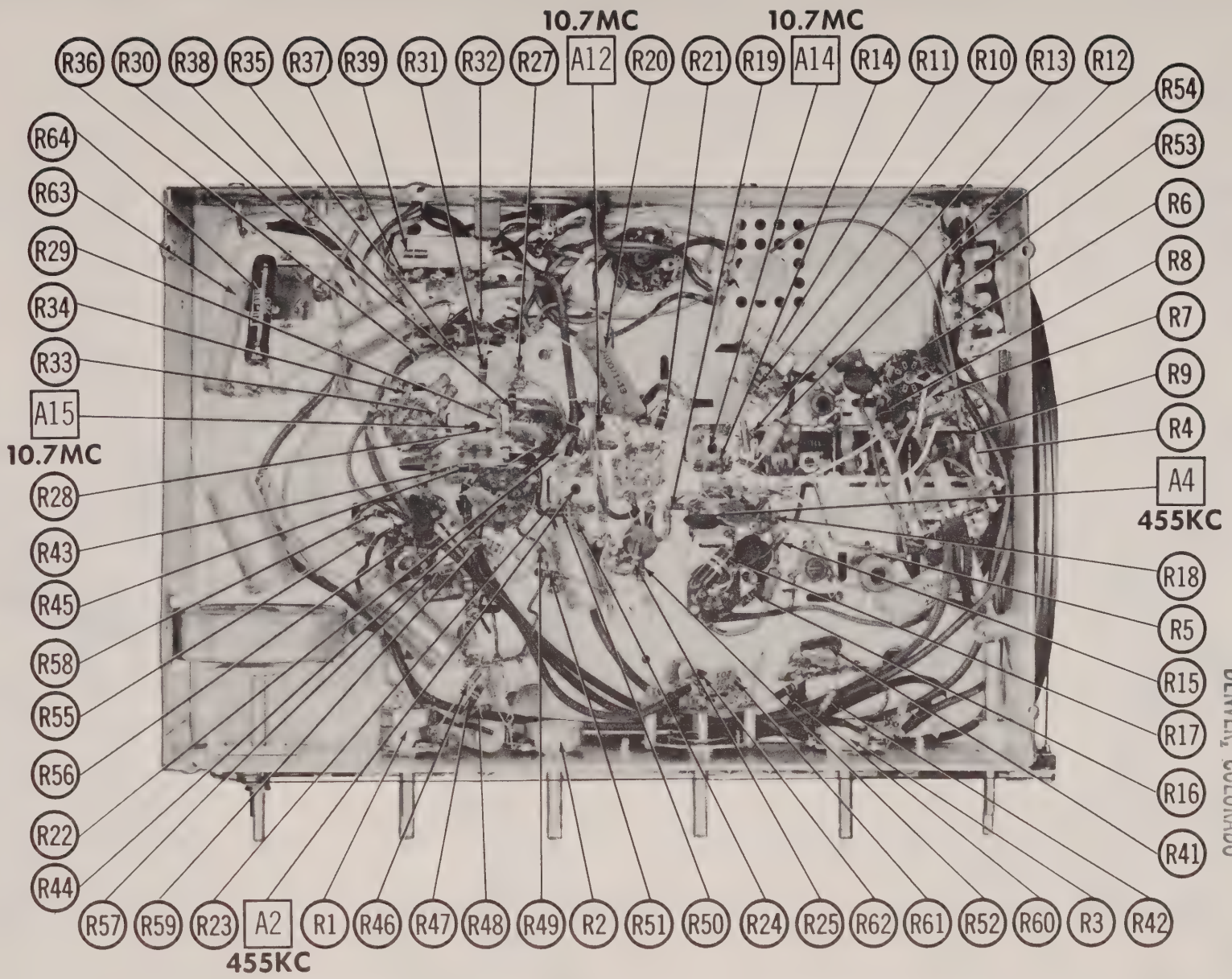


CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION

PROPERTY OF
L. F. DUNKINSHIP
3924 MEADE St.
DENVER, COLORADO

MAGNAVOX
CHASSIS CR-122

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.
Use an insulated alignment screwdriver for adjusting.
To set pointer, turn tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial.

AM ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.01MFD	High side to pin 7 (grid) of 6BE6 (V3). Low side to chassis.	455KC (400∿ Mod)	AM	1000KC	DC probe thru 1Meg to point (A). Common to chassis.	A1, A2, A3, A4	Adjust for maximum deflection.
2.	10MMF	High side to AM antenna terminals. Low side to chassis.	1400KC	"	1400KC	"	A5, A6, A7	"
3.	"	"	600KC	"	600KC	"	A8, A9	Adjust for maximum deflection. Repeat steps 2 and 3.

10KC FILTER ADJUSTMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	10MMF	High side to AM antenna terminal. Low side to chassis.	1400KC (10KC Swp)	AM	1400KC	AC probe to output socket. Common to chassis.	A10	Adjust for MINIMUM deflection.

FM IF AND RF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5.	.01MFD	High side to pin 2 (grid) of 6U8 (V2). Low side to chassis.	10.7MC (unmod.)	FM	Low frequency end of dial.	DC probe thru 1Meg to point (B). Common to chassis.	A11, A12, A13, A14, A15	Adjust for maximum deflection.
6.	"	"	"	"	"	DC probe thru 1Meg to point (C). Common to chassis.	A16	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
7.	120Ω, 150Ω carbon resistors	To FM antenna terminals with 120Ω in high side and 150Ω in low side.	107MC	"	107MC	DC probe thru 1Meg to point (B). Common to chassis.	A17, A18, A19	Adjust for maximum deflection.
8.	"	"	89MC	"	89MC	"	A20	Adjust for maximum deflection. Repeat steps 7 and 8.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
5.	.01MFD	High side to pin 2 (grid) of 6U8 (V2). Low side to chassis.	10.7MC (300KC Swp)	FM	Low frequency end of dial.	Vert. amp. thru 1Meg to point (B). Low side to chassis.	A11, A12, A13, A14, A15	Disconnect stabilizing capacitor C2. Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
6.	"	"	"	"	"	Vert. amp. thru 1Meg to point (C). Low side to chassis.	A16	Reconnect stabilizing capacitor C2. Adjust so that 10.7MC occurs at center of cross-over lines similar to Fig. 2. SLIGHTLY re-touch A15 for maximum amplitude and straightness of crossover lines.

FIG. 1

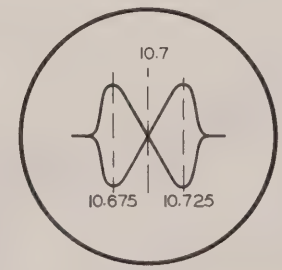


FIG. 2

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BZ6	
V2	FM Mixer-Osc.	6U8	
V3	AM Converter	6BE6	
V4	1st IF Amplifier	6BA6	
V5	2nd FM IF Amplifier	6BA6	

ITEM No.	USE	TYPE	NOTES
V6	Ratio Detector	6AL5	
V7	Tuning Indicator	6E5	
V8	Preamplifier	6AV6	
V9	AF Amp. -Cathode Follower	12AT7	
V10	Rectifier	5Y3GT	

ELECTROLYTIC CAPACITORS

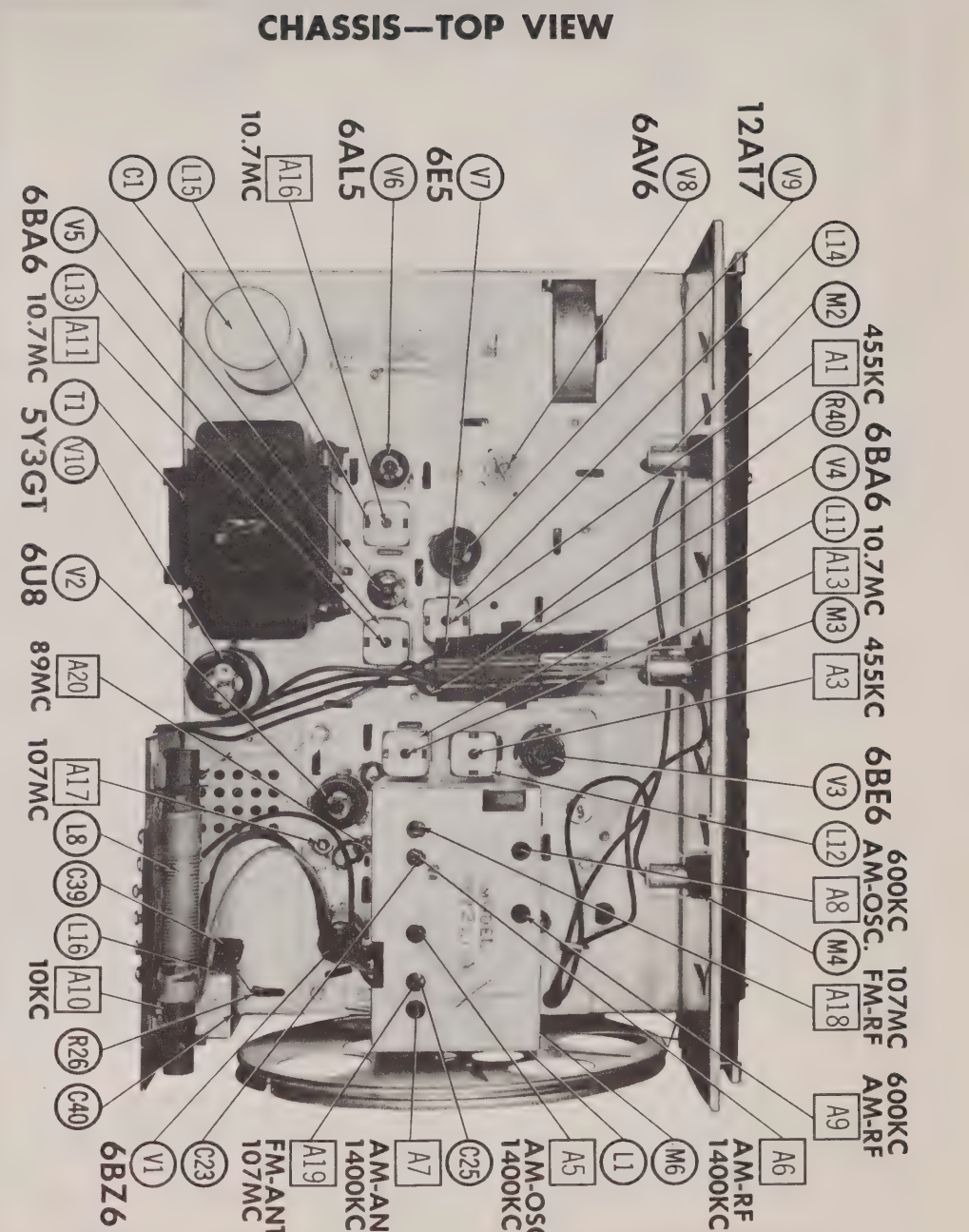
ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA MAGNAVOX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲35	450	270021-60	AFH4-15-10	D122	FP444. 9	TMQ123	Q-060 MT-4510	TVL-4774
B	■25	450							
C	10	450							
D	▲20	450							
C2	4	50	270027-27	SRE50V5	BR550	TC30	TD-4-50	MMT-0505	TVA-1303
C3	20	25	270027-28	PRS25V25	BR202	TC26	TD-25-25	FM-0225	TVA-1205
C4	20	25	270027-28	PRS25V25	BR202	TC26	TD-25-25	FM-0225	TVA-1205
C5	20	150	270027-13	PRS150V20	BR2015	TC45	TD-20-150	FM-1520	TVA-1410

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA MAGNAVOX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C6	220	500	250187-57	NP0-SI220	D6-221	22R5T22	811-221		MS-322	
C7	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C8	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C9	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C10	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C11	100	500	250187-53	NP0-SI100	D6-101	22R5T1	801-101	MCB235	MS-31	
C12	33	500	250187-47	NP0-SI33	D6-330	22R5Q33	831-330	ZT-5433	MS-433	
C13	2. 2		250221-118	NP0-SI2. 2	TCZ-2R2	TZ05	NP0A-2R2		5TCCB-V22	
C14	5		250088-138							
C15	2.5-12.5		250188-9							
C16	220	500	250159-55	NP0-SI220	TCZ-220	22R5T22	NP0-335-221		MS-322	
C17	220	500	250159-55	NP0-SI220	TCZ-220	22R5T22	NP0-335-221		MS-322	
C18	. 0047	400	250211-5	BPD-0047	D6-472	CUB6D47	GP2-333-472	PT6247	6TM-D47	
C19	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C20	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C21	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C22	. 1	200	250202-13	P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C23	20	500	250187-5	NP0-SI20	TCZ-20	22R5Q2	NP0K-200	ZT-542	MS-42	
C24	47	500	250187-49	NP0-SI47	D6-470	22R5Q47	831-470	ZT-5447	MS-447	
C25	20	500	250187-5	NP0-SI20	TCZ-20	22R5Q2	NP0K-200	ZT-542	MS-42	
C26	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C27	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C28	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C29	3300		250175-28	BPD-0033	D6-332	K077	811-0033	UC-5233	5HK-D33	
C30	10000		250218-19	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C31	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C32	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C33	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C34	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C35	330		250207-49	SI330	D6-331	TP43	GP2-331	UC-5233	5GA-T33	
C36	330		250207-49	SI330	D6-331	TP43	GP2-331	UC-5233	5GA-T33	
C37	1500		250218-18	DI-0015	DD-152	G071	801-0015	DC-5215	5GA-D15	
C38	. 1	200	250202-13	P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C39	1000		250228-354	1464-001		1R5D1		MCE255	MS-21	
C40	1000		250228-354	1464-001		1R5D1		MCE255	MS-21	
C41	5000		250175-30	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C42	47		250218-17	N750-DI47	TCN-47	N033	N750-470	NT-5447	5TCU-Q47	
C43	1000		250228-354	DI-001	D6-102	1R5D1	811-102	UC-521	5GA-D1	
C44	10000		250218-19	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C45	22		250218-1	N750-DI22	TCN-22	N024	N750K-220		5TCU-Q22	
C46	100		250218-22	BPD-0001	DD-101	G042	801-101	UC-531	5GA-T1	
C47	10000		250218-19	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C48	2000		250218-20	BPD-002	DD-202	K072	801-002	DC522	5HK-D2	
C49	. 022	600	250202-9	BPD-02	DF-203	CUB6S22	817-02	PT6122	6TM-S22	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	MAGNAVOX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C50	220		250218-5	DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C51	2000		250218-20	BPD-002	DD-202	K072	801-002	DC522	5HK-D2	
C52	10000		250218-19	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C53	220		250218-5	DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C54	3300		250175-28	BPD-0033	D6-332	K077	811-0033	UC-5233	5HK-D33	
C55	220		250218-5	DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C56	1000		250228-354	DI-001	D6-102	1R5D1	811-102	UC-521	5GA-D1	
C57	10000		250218-19	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C58	1500		250218-18	DI-0015	DD-152	K071	811-152	UC-5215	5GA-D15	
C59	220		250218-5	DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C60	220		250218-5	DI-00022	DD-221	G051	811-221	UC-5322	5GA-T22	
C61	33		250218-21	N750-DI33	TCN-33	N029	N750K-330		5TCU-Q33	
C62	68		250218-7	N750-DI68	TCN-68	N038	N750L- 680		5TCU-Q68	
C63	5000		250175-1	BPD-005	DD-502	K080	811-005	DC525	5HK-D5	
C64	10000	1000	250219-2	P1088N-01	DD16-103	CUB16S1		PT1611	10TM-S1	

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	MAGNAVOX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1Meg	½	220073-20	AB-70	A47-1Meg-2	Q13-137	U53	Bass
B	Shaft		Not Req.	AK-3	FS-3	Not Req.	Not Req.	Attach to R1A
C	Switch		Not Req.	KB-1	SWE-12	76-1	US-26	Attach to R1A
R2A	1Meg	½	220072-29	B-70	A47-1Meg-S	Q13-137	U53	Treble
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R2A
R3A	1Meg	½	220074-11	BT-7417	A47F3-1Meg	Q18-137X	UT-440	Volume - Tapped @ 100K
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R3A

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	MAGNAVOX PART No.	IRC PART No.	NOTES
R4	1Meg		230104-98	BTS-1Meg	
R5	4700Ω		230104-70	BTS-4700	
R6	15K		230104-76	BTS-15K	
R7	100K		230104-86	BTS-100K	
R8	180Ω		230104-53	BTS-180	
R9	1000Ω	2	230096-62	BTB-1000	
R10	100K		230104-86	BTS-100K	
R11	2700Ω		230104-67	BTS-2700	
R12	1000Ω	1	230105-62	BTA-1000	
R13	68K		230104-84	BTS-68K	
R14	1000Ω		230104-62	BTS-1000	
R15	100Ω		230104-50	BTS-100	
R16	22K		230104-78	BTS-22K	
R17	15K	2	230096-76	BTB-15K	
R18	1000Ω		230104-62	BTS-1000	
R19	2.2Meg		230104-102	BTS-2.2Meg	
R20	8200Ω	5	240071-13	PW7-8200	
R21	68Ω		230104-48	BTS-68	
R22	220K		230104-90	BTS-220K	
R23	47K		230104-82	BTS-47K	
R24	47K		230104-82	BTS-47K	
R25	150K			BTS-150K	Note 1
R26	220K		230104-90	BTS-220K	
R27	1000Ω		230104-62	BTS-1000	
R28	22K		230104-78	BTS-22K	
R29	47K		230104-82	BTS-47K	
R30	68Ω		230104-48	BTS-68	
R31	120Ω		230104-51	BTS-120	
R32	68K		230104-84	BTS-68K	
R33	1000Ω		230104-62	BTS-1000	
R34	1800Ω		230104-65	BTS-1800	

ITEM No.	RATING OHMS	RATING WATT	MAGNAVOX PART No.	IRC PART No.	NOTES
R35	15K		230104-76	BTS-15K	
R36	15K		230104-76	BTS-15K	
R37	2.2Meg		230104-102	BTS-2.2Meg	
R38	6.8Meg		230104-108	BTS-6.8Meg	
R39	1.5Meg		230104-100	BTS-1.5Meg	
R40	470K		230104-94	BTS-470K	
R41	470K		230104-94	BTS-470K	
R42	33K		230104-80	BTS-33K	
R43	470K		230104-94	BTS-470K	
R44	220K		230104-90	BTS-220K	
R45	3300Ω		230104-68	BTS-3300	
R46	47K		230104-82	BTS-47K	
R47	10K		230104-74	BTS-10K	
R48	100K		230104-86	BTS-100K	
R49	1Meg		230104-98	BTS-1Meg	
R50	4700Ω		230104-70	BTS-4700	
R51	1000Ω		230104-62	BTS-1000	
R52	4700Ω		230104-70	BTS-4700	
R53	3.3Meg		230104-104	BTS-3.3Meg	
R54	100K		230104-86	BTS-100K	
R55	2.2Meg		230104-102	BTS-2.2Meg	
R56	1.5Meg		230104-100	BTS-1.5Meg	
R57	68K		230104-84	BTS-68K	
R58	3300Ω		230104-68	BTS-3300	
R59	47K		230104-82	BTS-47K	
R60	4.7Meg		230104-106	BTS-4.7Meg	
R61	2.2Meg		230104-102	BTS-2.2Meg	
R62	1Meg		230104-98	BTS-1Meg	
R63	450Ω	10	240072-2	1 3/4A-450	
R64	750Ω	10	240021-46	1 3/4A-750	

Note 1: Not used in some versions.

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	MAGNAVOX PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC @ .69A	550VCT @ .105A	5VAC @ 2A	6.3VAC @ 3.2A	300081-1					

COILS (RF-IF)

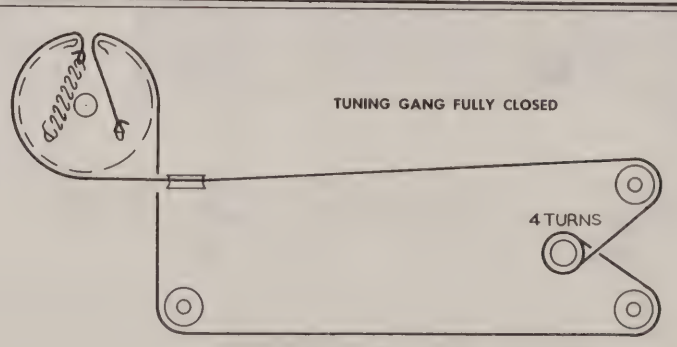
ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	MAGNAVOX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	FM Ant. Trans.	.1ΩCT	0Ω	360491-2				
L2	FM Ant. Coil	0Ω		360629-1				
L3	RF Choke	.2Ω		360522-9	19-1002		4606	2 Microhenries
L4	FM RF Coil	0Ω		360629-1				
L5	Fil. Choke	.2Ω		360522-9	19-1002		4606	2 Microhenries
L6	Fil. Choke	.2Ω		360522-9	19-1002		4606	2 Microhenries
L7	FM Osc. Coil	0Ω		360628-1				
L8	AM Loop Stick	0Ω	.5Ω	460894-1				
L9	AM RF Coil	20Ω	3.4Ω	360348-2			A-5495-RF	
L10	AM Osc. Coil	5.3Ω		360407-2	14-1033			Tapped @ .5Ω
L11	1st FM IF	.7Ω	.7Ω	360626-1	16-3487	FM-254	1463	
L12	1st AM IF	16Ω	16Ω	360611-1	16-6758	BC-352	12-C1	
L13	2nd FM IF	.7Ω	.7Ω	360626-1	16-3487	FM-254	1463	
L14	2nd AM IF	27Ω	27Ω	360625-1	16-6770	BC-355	12-C6	
L15	Ratio Det.	4.2Ω	1Ω	360627-1	17-3490	FM-255	1465	
L16	10KC Filter	350Ω		360621-1				

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	MAGNAVOX PART No.	SYLVANIA PART No.	NOTES
M1	1N34A	530030-2	1N34A	Audio Det. (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	MAGNAVOX PART No.	NOTES
M2	Dial Light	180161-17	#1847
M3	Dial Light	180161-17	#1847
M4	Dial Light	180161-17	#1847
M5	Pilot Light	180161-6	#44, Not used in some versions.
M6	Tuning Cap.	260135-1	6 Gang
M7	Switch	160255-1	Selector (Rotary, Wafer Type)
M8	Switch	160252-3	Phono Compensation (2 Pole - 4 Position; Rotary, Wafer Type)
	Dial Glass	150426-1	
	Dial Pointer	102449-1	



DIAL CORD STRINGING

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MASCO
MODELS FM-6, PM-6

MASCO
MODELS FM-6, PM-6

TRADE NAME	Masco Models FM-6, PM-6
MANUFACTURER	Mark Simpson Mfg. Co., Inc., 32-28 49th. St., Long Island City 3, N.Y.
TYPE SET	AC-DC Operated Intercommunications Unit
TUBES (Three)	Types 12AX7 AF Amplifier, 50C5 Output, 35W4 Rectifier
POWER SUPPLY	110-120 Volts AC-DC RATING .22 Amp. @ 117 Volts AC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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PARTS LIST AND DESCRIPTIONS

MASCO
MODEL FM-6

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	AF Amplifier	12AX7	
V2	Audio Output	50C5	

ITEM No.	USE	TYPE	NOTES
V3	Rectifier	35W4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MASCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■40	150		AFH3-09	C011	TCT3116	TMT-11	FMT-315	TVL-3438
B	▲40	150							
C	20	150							
C2	10	50		PRS50V10	BR105	TC32	TD-10-50	MMT-0510	TVA-1304

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	MASCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3	5000			BPD-005	DD-502	K080	811-005	DC-525	5HK-D5	
C4	5000			BPD-005	DD-502	K080	811-005	DC-525	5HK-D5	
C5	470			BPD-00047	DD-471	K060	831-471	UC-5347	5GA-T47	
C6	.02	600		BPD-02	DD-203	CUB6S2	817-02	PT612	6TM-S2	
C7	.1	600		P688N-1	DF-104	CUB6P1		PT601	6TM-P1	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MASCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	500K	½		AB-60	A47-500K-Z	Q13-133	U-48	Volume
B	Shaft			AK-9	RS-2	Not Req.	Not Req.	Attach to R1A
C	Switch			KB-1	SWE-12	76-1	US-26	Attach to R1A
R2	50Ω	2						Balance - wire wound

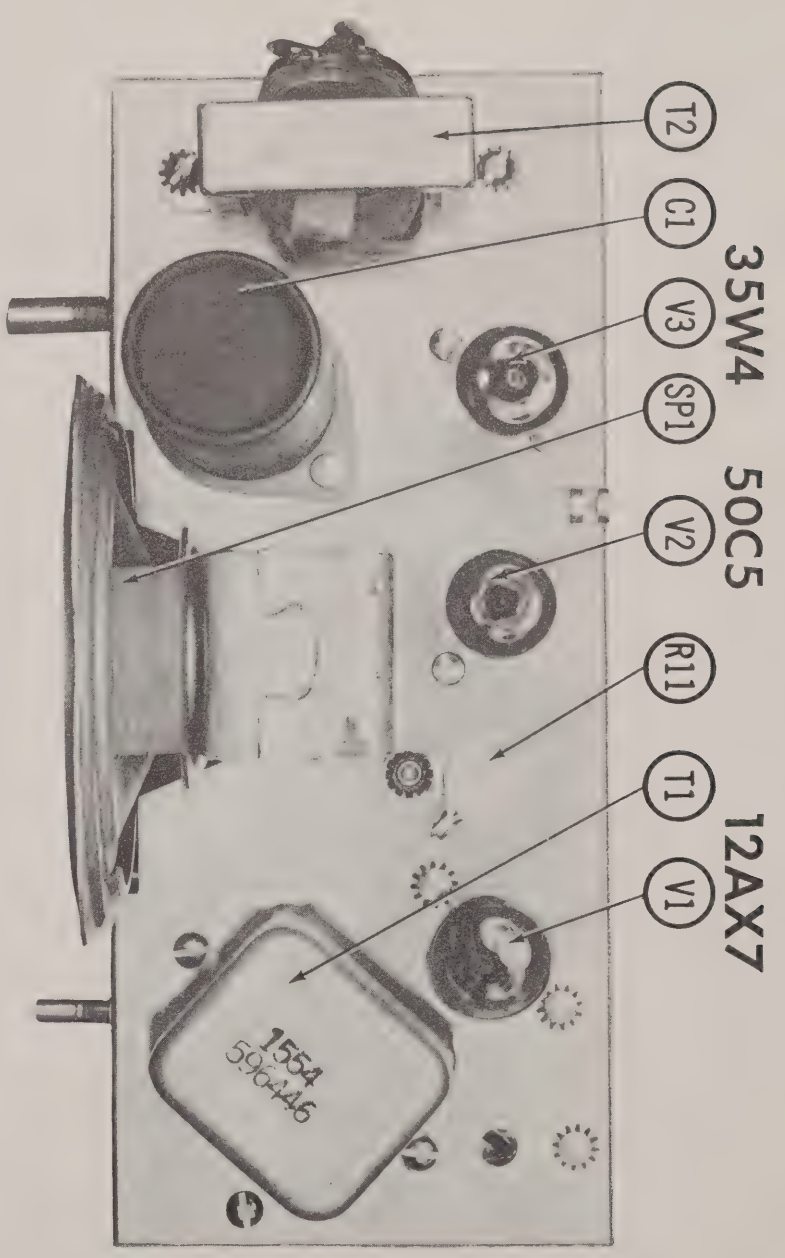
RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	MASCO PART No.	IRC PART No.	
R3	1500Ω			BTS-1500	
R4	270K			BTS-270K	
R5	10Meg			BTS-10Meg	
R6	1Meg			BTS-1Meg	
R7	270K			BTS-270K	

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	MASCO PART No.	IRC PART No.	
R8	150Ω			BTS-150	
R9	270Ω	2		BTB-270	
R10	4700Ω			BTS-4700	
R11	135Ω	10			

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (INPUT)

ITEM No.	Resistance PRI.	Resistance SEC.	REPLACEMENT DATA MASCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	.46Ω	580Ω	1554						
	Turns Ratio 1:	100							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA MASCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	2.3K	16Ω	13-O-2C	Z1001	A-2902 ①	A-3849 ①	24S60	S-53X ①	① Drill one new mounting hole.

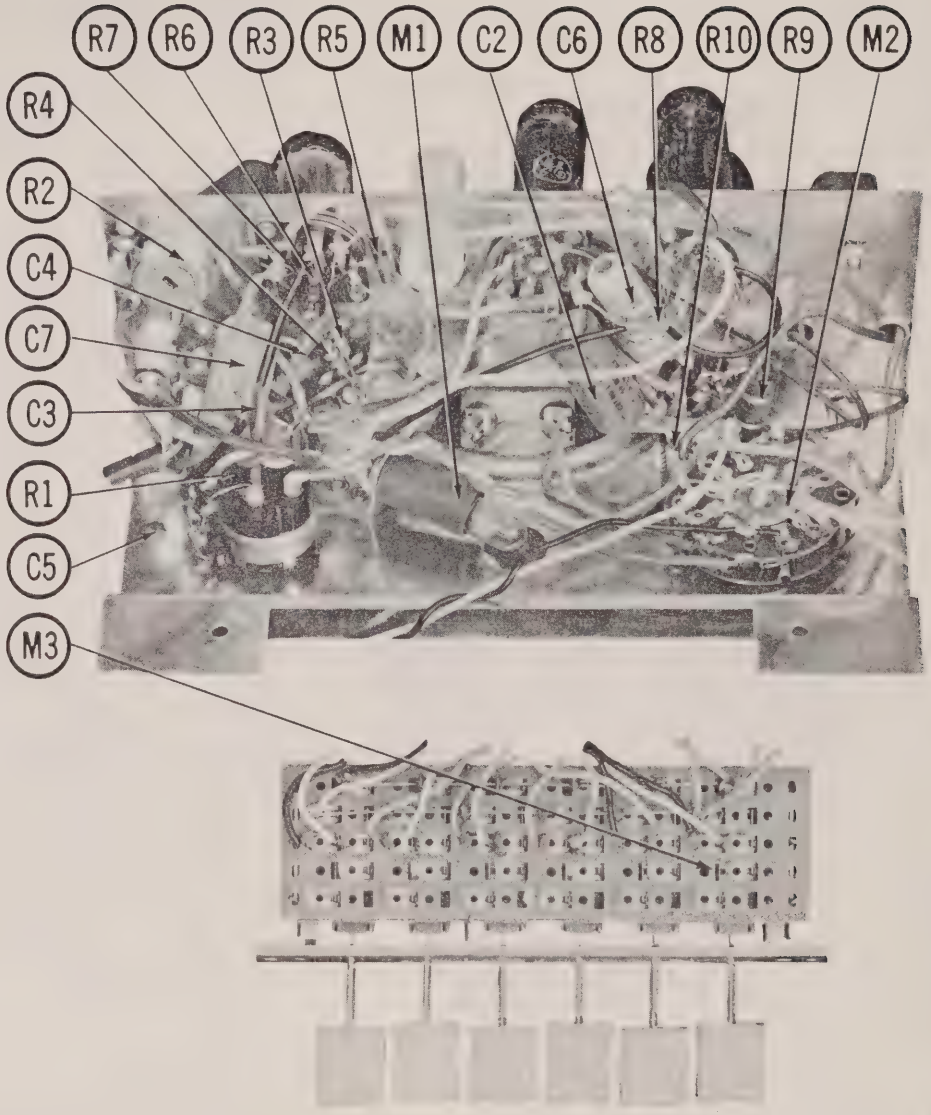
SPEAKER

ITEM No.	RATINGS SIZE	RATINGS FIELD	RATINGS V. C. IMP.	REPLACEMENT DATA MASCO PART No.	QUAM PART No.	RCA TYPE No.	NOTES
SP1	3½"	PM	16Ω	1454	3A07Z16		

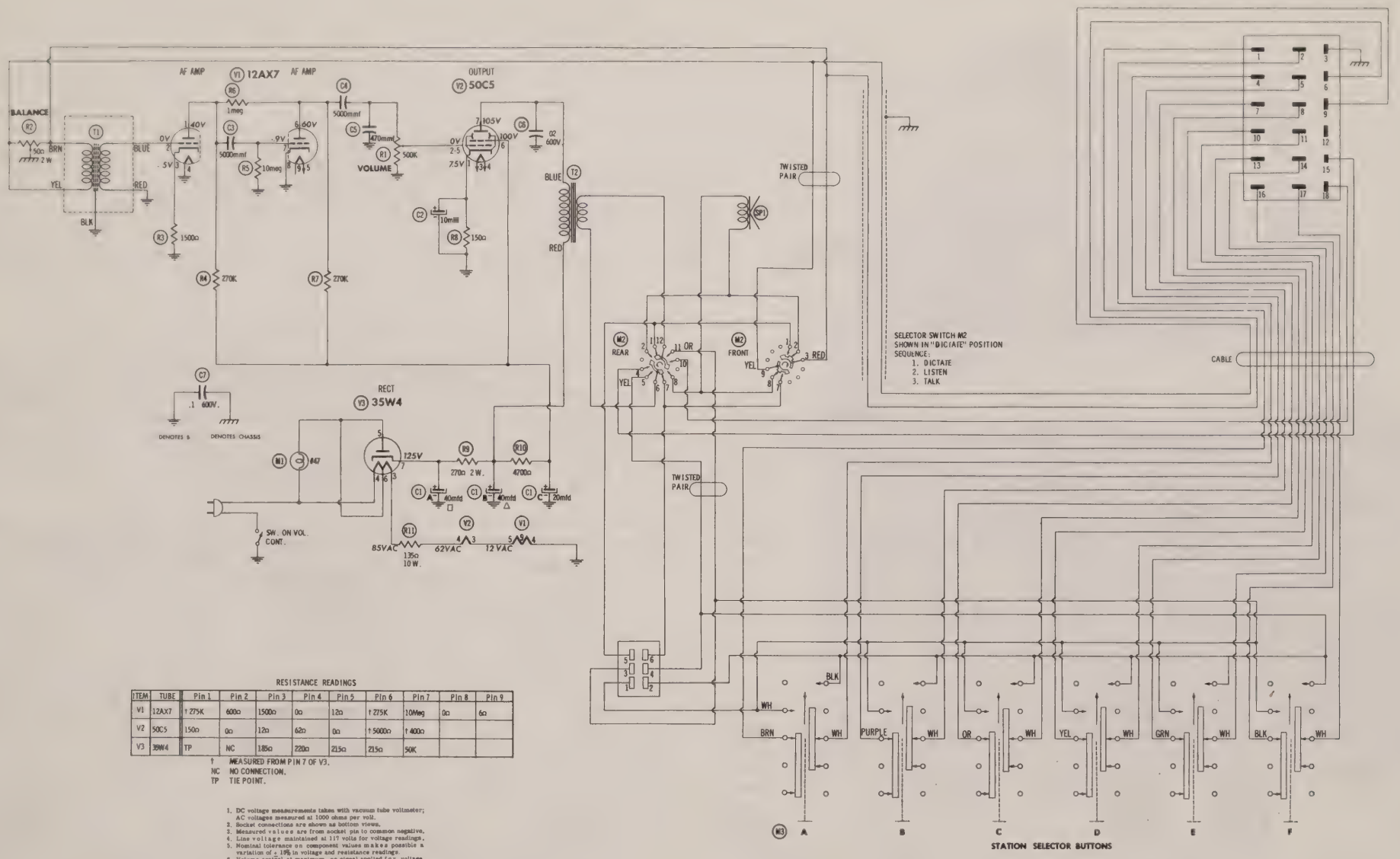
MISCELLANEOUS

ITEM No.	PART NAME	MASCO PART No.	NOTES
M1	Pilot Light		#47
M2	Switch		Talk-Listen-Dictate (2 Pole - 3 position, rotary, wafer type)
M3	Switch Assy.		Station selector - pushbutton (slide type)

CHASSIS—BOTTOM VIEW



MASCO MODEL FM-6



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AX7	†275K	600Ω	1500Ω	0Ω	12Ω	†275K	10Meg	0Ω	6Ω
V2	50C5	150Ω	0Ω	12Ω	62Ω	0Ω	†5000Ω	†400Ω		
V3	35W4	TP	NC	185Ω	220Ω	215Ω	215Ω	50K		

† MEASURED FROM PIN 7 OF V3.
NC NO CONNECTION.
TP TIE POINT.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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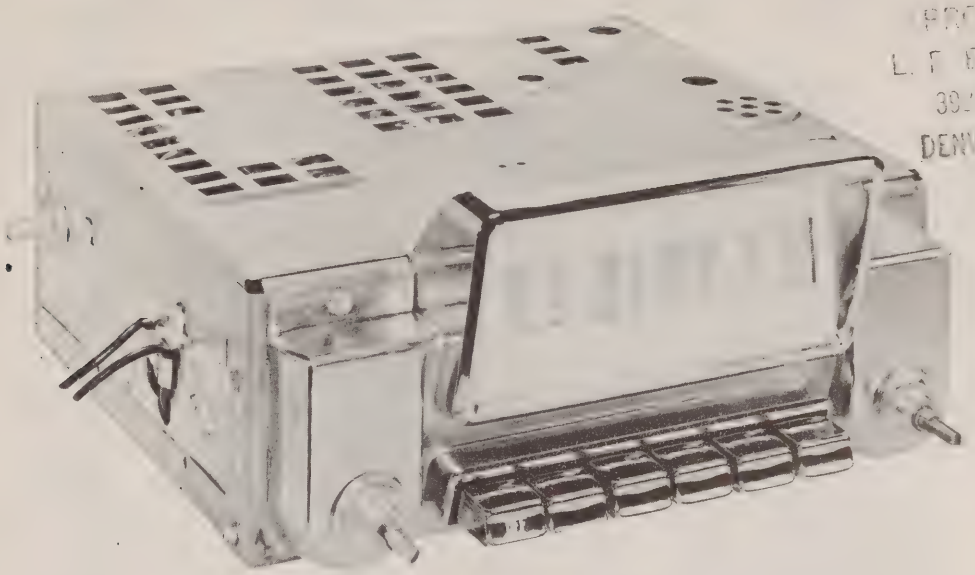
RETMA MEMBER

MERCURY MODEL 6BM

PROPERTY OF
L. F. B[illegible] SHIP
39[illegible] MAIN ST.
DENVER, COLORADO



TRADE NAME	Mercury Model 6BM (FDT-18805-C) (For 1956 Mercury Automobiles)
MANUFACTURER	Bendix Radio, Div. of Bendix Aviation Corp., Baltimore 4, Md.
TYPE SET	Battery Operated Custom Built AM Superheterodyne Automobile Receiver
TUBES (Eight)	Types 12BA6 RF Amplifier, 12BE6 Converter, 12AU6 IF Amplifier, 12AV6 Det-AVC-AF Amp., 12AV6 Phase Inverter, (2) 12AQ5 Output, 12X4 Rectifier
POWER SUPPLY	12 Volt Storage Battery
TUNING RANGE—BROADCAST	540KC - 1600KC

RATING 3.8 Amp. @ 12.6 Volts DC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Fig. 1	Thru dummy to antenna receptacle.	265KC (400∿ Mod)	650KC	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	"	"	1605KC	High frequency end of dial.	"	A5, A6, A7	"
3.	With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum volume.						
	The following steps are necessary only in case of core or tuning coil replacement.						
4.				High frequency end of dial.	Across voice coil.	A8, A9, A10	Adjust tuner cores so that they remain in coil forms, but out of coils.
5.	Fig. 1	Thru dummy to antenna receptacle.	1605KC	"	"	A5, A6, A7	Adjust for maximum output in order given.
6.	"	"	1200KC	1200KC	"	A10, A9, A8	"
7.	"	"	1605KC	High frequency end of dial.	"	A5, A6, A7	Adjust for maximum output in order given. Repeat steps 6 & 7 but adjust A8, A9 and A10 to 1200KC only.

PUSHBUTTON ADJUSTMENT

Pull pushbutton all the way out. Manually tune to desired station. Push pushbutton in firmly. Repeat on remaining pushbuttons.

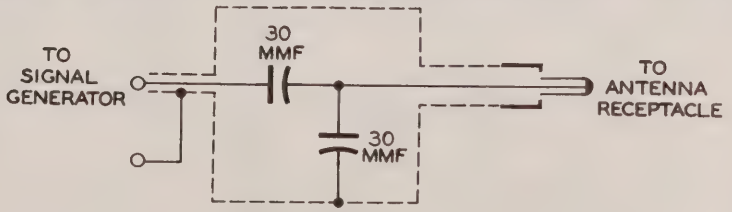


FIG. 1

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PARTS LIST AND DESCRIPTIONS

MERCURY MODEL 6BM

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BA6	
V2	Converter	12BE6	
V3	IF Amplifier	12AU6	
V4	Det-AVC-AF Amplifier	12AV6	
V5	Phase Inverter	12AV6	
V6	Output	12AQ5	
V7	Output	12AQ5	
V8	Rectifier	12X4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■20	350	C-220108-4	AFH3-104	B029	FP329.5	TMD-70	D-155	R2276*
B	▲20	300			BBR20-25		TD-20-350	MT-0225	
C	20	25							

* Non catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BENDIX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2	120		C-220099-29	NP0-D1120	TCZ-120	TZ32	NP0-333-121		5TCC-T12	
C3	100		C-220095-3	SI100	D6-101	TP34	GP1K-101	UC-531	5GA-T1	
C4	.05	200	C-220098-5	BPD-05	DF-503	CUB2S5		PT415	2TM-S5	Note 1
C5	10		C-220095-27	NP0-D110	TCZ-10	Z018	NP0A-100	ZT-541	5TCC-Q1	
C6	100		C-220095-26	N750-D1100	TCN-100	N042	N750L-101	NT-531	5TCU-T1	
C7	.1	400	C-220098-6	P488N-1	DF-104	CUB4P1		PT401	4TM-P1	
C8	.0068	200	C-220098-35	BPD-0068	D6-682	CUB6D68	GP3-333-682		6TM-D68	Note 2
C9	.0025	400		BPD-0025	D6-252	K074	GP2-333-252	UC-5225	6TM-D25	Note 3
C10	.0068	400	C-220098-35	BPD-0068	D6-682	CUB6D68	GP3-333-682		6TM-D68	
C11	5000			BPD-005	DD-502	K080	811-005	DC-525	5HK-D5	
C12	47		C-220095-4	SI47	D6-470	G033	831-470	UC-5447	5GA-Q47	
C13	.02	400	C-220098-28	BPD-02	DD-203	CUB4S2	817-02	PT412	4TM-S2	
C14	.02	200	C-220098-4	BPD-02	DD-203	CUB4S2	817-02	PT412	4TM-S2	
C15	.005	400	C-220098-32	SI5000	D6-502	CUB6D5	GP2-333-502	PT625	6TM-D5	Note 4
C16	.007	2000	C-220098-46							
C17	.5	100	C-220098-10	VHC36		MP2P5		RF480	68P20	

Note 1: Early versions use .1MFD in this application. (part #C-220098-8)
Note 2: Early versions use .005MFD in this application. (part #C-220098-32)
Note 3: Early versions use .0018MFD in this application. (part #C-220098-36)
Note 4: Not used in early versions.

CONTROLS

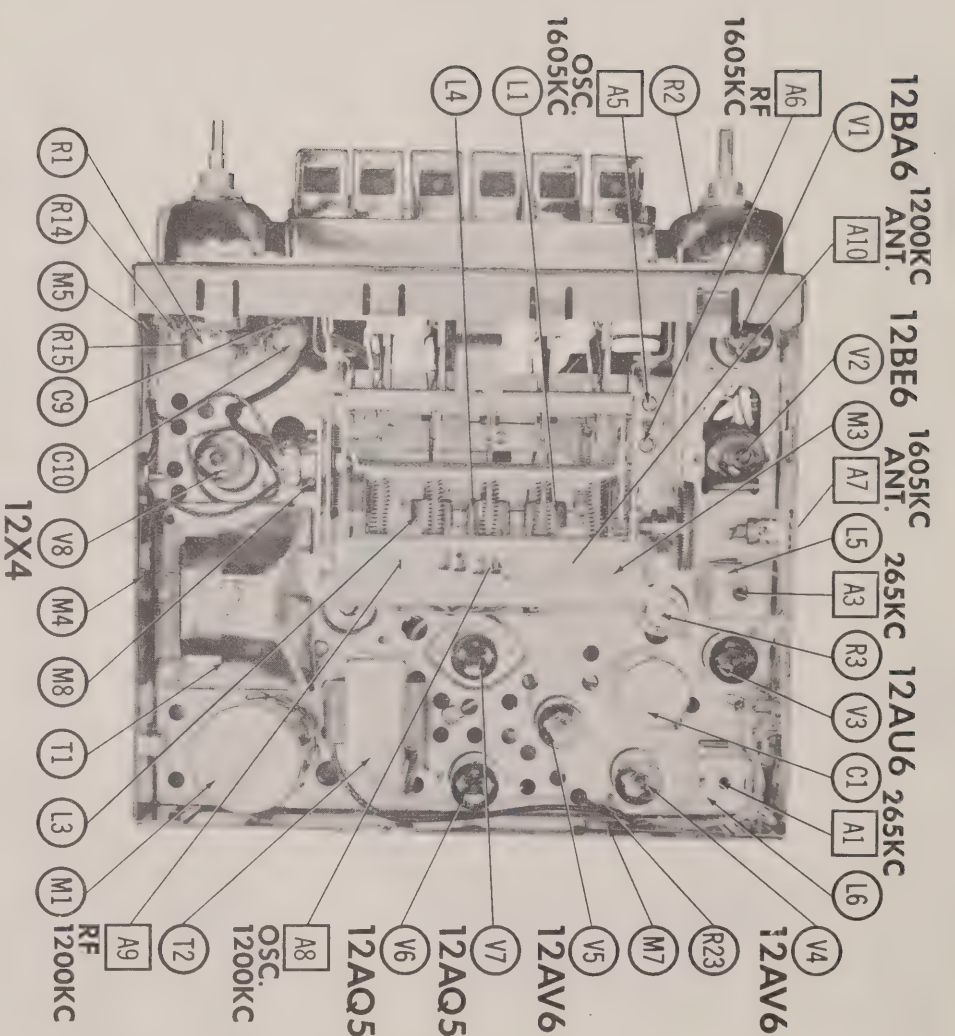
ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	Switch		L219660-2					Tone
B	700K	½						Volume-Tapped @ 210K
R2	1L 5Ω	2	L219679-1		RTV-572C			Fader (Wire-wound)
R3	3000Ω	2	C219555-8		39-3000		FL-4K	Sensitivity (Wire-wound)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA BENDIX PART No.	IRC PART No.	NOTES
R4	1Meg		C-220551B-105M	BTS-1Meg	
R5	1Meg		C-220551B-105M	BTS-1Meg	
R6	47K		C-220551B-473M	BTS-47K	
R7	68Ω		C-220551B-680M	BTS-68	
R8	47Meg				Note 1
R9	220Ω		C-220551B-221M	BTS-220	
R10	15K	2	C-220551D-153M	BTB-15K	
R11	2.2Meg			BTS-2.2Meg	Note 2
R12	220K		C-220551B-224M	BTS-220K	Note 3
R13	180K		C-220551B-184M	BTS-180K	Note 4
R14	47K		C-220551B-473M	BTS-47K	Note 5
R15	56K			BTS-56K	
R16	10Meg		C-220551B-106M	BTS-10Meg	
R17	6.8Meg			BTS-6.8Meg	
R18	470K		C-220551B-474M	BTS-470K	
R19	470K		C-220551B-474M	BTS-470K	
R20	470K		C-220551B-474M	BTS-470K	
R21	470K		C-220551B-474M	BTS-470K	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	BENDIX PART No.	IRC PART No.	
R22	330Ω	1	C-220551B-102K	BTA-330	
R23	1000Ω			BTS-1000	
R24	18Ω			BTS-18	Note 6

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	BENDIX PART No.	IRC PART No.	
R25	1000Ω	1	C-220551C-102K	BTA-1000	
R26	180Ω	1	C-220551C-184M	BTA-180	
R27	180Ω	1	C-220551C-184M	BTA-180	

Note 1: Early production models use 22Meg in this application.
Note 2: Early production models use 1Meg in this application.
Note 3: Early production models use 270K in this application.
Note 4: Early production models use 470K in this application.
Note 5: Early production models use 56K in this application.
Note 6: Early production models use 33Ω in this application.

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	BENDIX PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	12.6VCT @2.3A	530VCT @.065A			C282975-2	V3903	P-2978	P-6489	22R52	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	BENDIX PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	9700Ω	3-4Ω	C291798-3	Z1000	A-2938	A-3850	24S60	S-17X	

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C. IMP.	BENDIX PART No.	QUAM PART No.	RCA TYPE No.	
SP1	6" X 9"	PM	3-4Ω	L222088-2	69A2	238S1	

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	BENDIX PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Coil	14Ω						Part of M3
L2	RF Choke	28Ω					4652*	1090 Microhenries; Wound on 15K resistor.
L3	RF Coil	14Ω						Part of M3
L4	Osc. Coil	.3Ω	2.9Ω					Part of M3
L5	Input IF	50Ω	42Ω	L-291806-1	16-6752	BC-350	12-H1	
L6	Output IF	50Ω	42Ω	L-291807-1B	16-6754	BC-354	12-H6	
L7	Fil. Choke	.8Ω						115 Microhenries
L8	Vib. Hash Choke	.2Ω						14 Microhenries

* Parallel with 15K, 1W resistor.

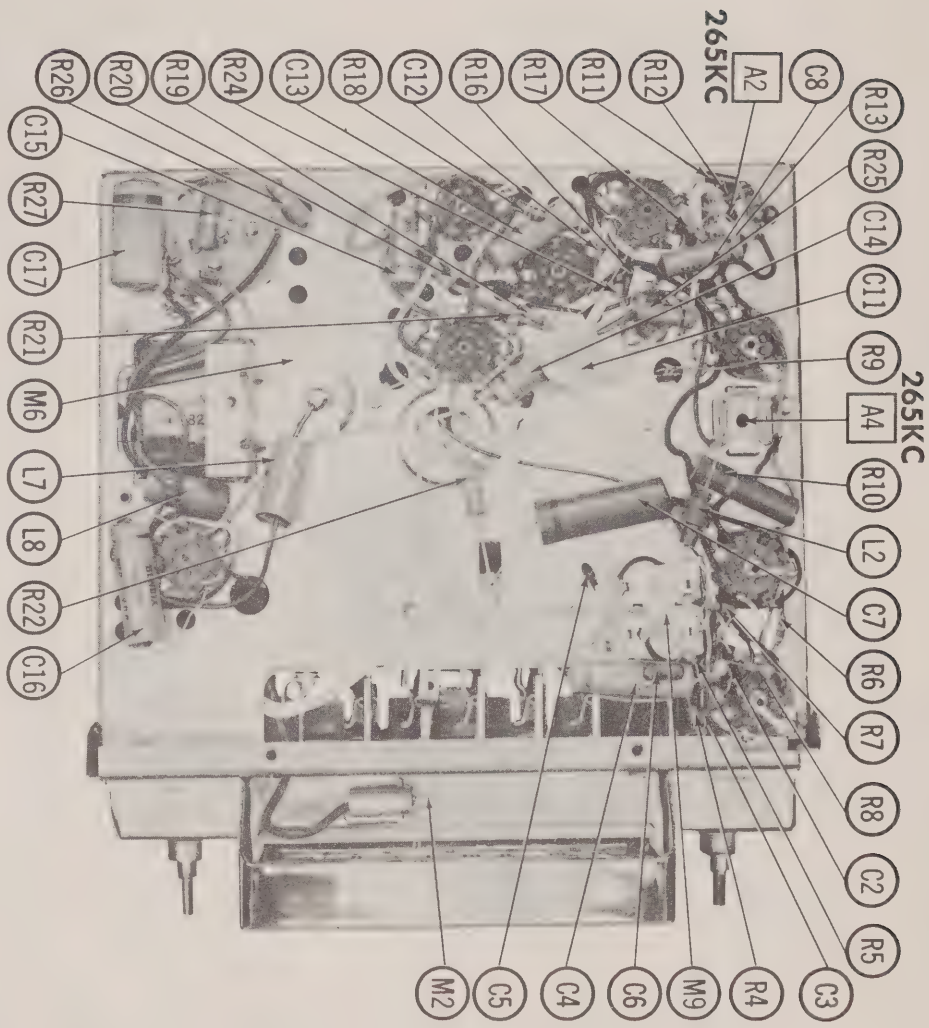
VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA				NOTES
				BENDIX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6V	115∿	C-221139-1	6330	G883	6330	

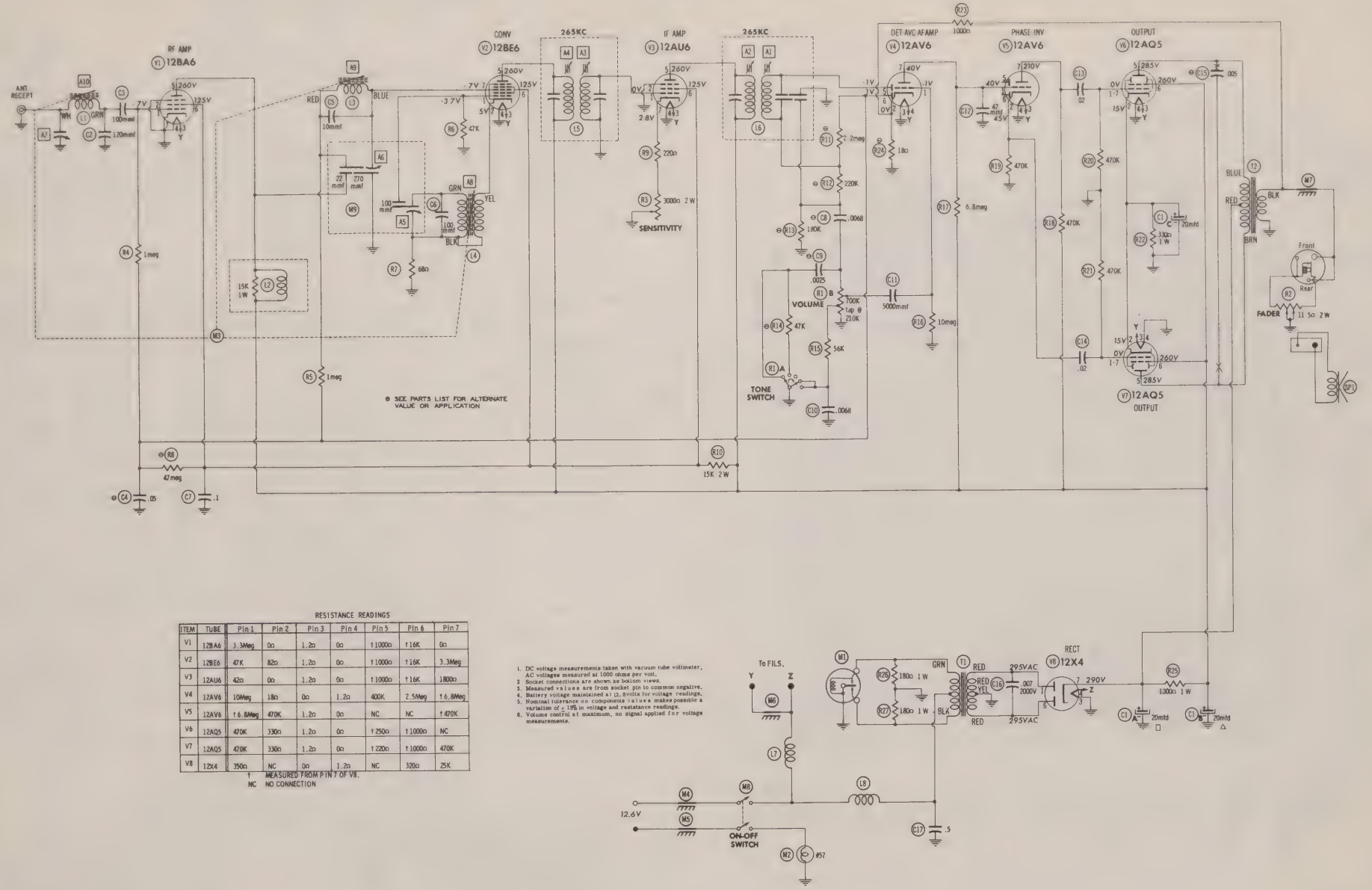
MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Dial Light		#57
M3	Tuner	220930-1	Permeability (Complete). Includes L1, L3 & L4.
M4	Spark Plate		Power Input Lead
M5	Spark Plate		Dial Light Lead
M6	Spark Plate		Filament
M7	Spark Plate		Speaker
M8	Switch		On-Off (Power), DPST
M9	Trimmer Cap.	C219085-3	Dual Trimmer: Osc. (A5) 340-400MMF, RF (A6) 4-75MMF; Also 22MMF, 270MMF, 100MMF Fixed Capacities
A7	Trimmer Cap.	C219083-1	Ant. (4-75MMF)

CHASSIS—BOTTOM VIEW



MERCURY MODEL 6BM



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BA6	3.3Meg	0Ω	1.2Ω	0Ω	†1000Ω	†16K	0Ω
V2	12BE6	47K	82Ω	1.2Ω	0Ω	†1000Ω	†16K	3.3Meg
V3	12AU6	42Ω	0Ω	1.2Ω	0Ω	†1000Ω	†16K	1800Ω
V4	12AV6	10Meg	18Ω	0Ω	1.2Ω	400K	2.5Meg	†6.8Meg
V5	12AV6	†6.8Meg	470K	1.2Ω	0Ω	NC	NC	†470K
V6	12AQ5	470K	330Ω	1.2Ω	0Ω	†250Ω	†1000Ω	NC
V7	12AQ5	470K	330Ω	1.2Ω	0Ω	†220Ω	†1000Ω	470K
V8	12X4	350Ω	NC	0Ω	1.2Ω	NC	320Ω	25K

† MEASURED FROM PIN 7 OF V8.
NC NO CONNECTION

1. DC voltage measurements taken with vacuum tube voltmeter, AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12. 6volts for voltage readings.
5. Nominal tolerance on components values makes possible a variation of ± 15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

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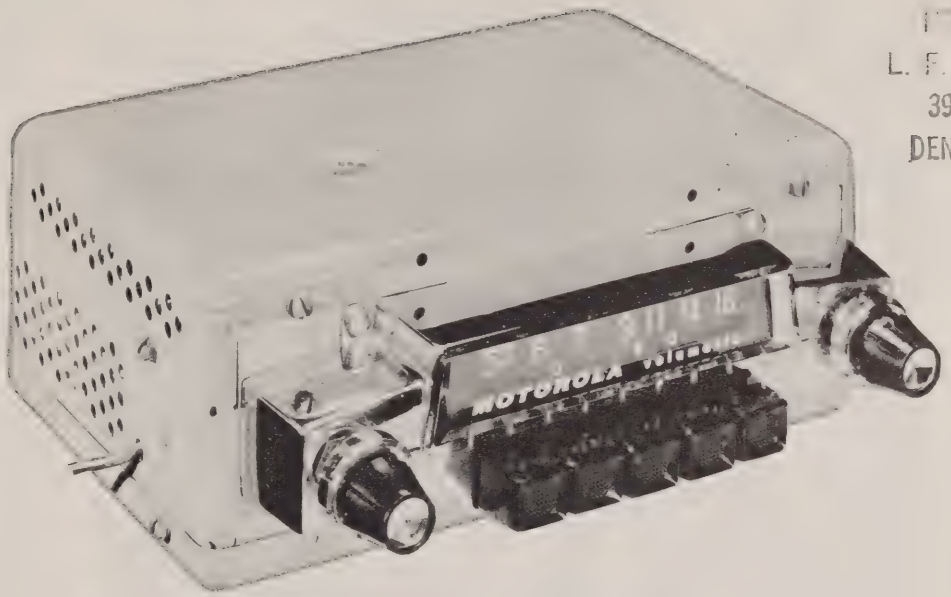
MOTOROLA
MODELS 556, 596, 596-12



TRADE NAME	Motorola Models 556, 596, 596-12
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Ill.
TYPE SET	Battery Operated Universal Type AM Superheterodyne Automobile Receiver
TUBES (Six)	Types 6BD6 RF Amplifier, 6BE6 Converter, 6BD6 IF Amplifier, 6CR6 Det-AVC-AF Amp., 6AQ5 Output, 6X4 Rectifier (12 Volt Types Used In Model 596-12)
POWER SUPPLY	6 Volt Storage Battery (Models 556, 596) — RATING 5.2 Amp. @ 6.3 Volts DC
	12 Volt Storage Battery (Model 596-12) — 2.6 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540KC - 1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to pin 7 (grid) of 6BE6 (V2). Low side to chassis.	455KC (400% Mod)	High frequency end stop.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle.	1610KC	"	"	A5, A6, A7	"
*3.	"	"	"	"	"	A5, A6, A7	Back A8, A9, A10 (tuning cores) out of coils but not out of coil forms. Adjust A5, A6, A7 for maximum output.
*4.	"	"	1180KC	Adjust carriage 19/64" from high frequency end stop.	"	A8, A9, A10	Adjust for maximum output.
*5.	"	"	1610KC	High frequency end stop.	"	A5, A6, A7	Retouch for maximum output.
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC, and adjust A7 for maximum volume.						

* Not necessary, except in case of tampering or replacement of tuning coils or components.

PUSHBUTTON ADJUSTMENT

Pull pushbutton out. Tune manually to desired station. Press pushbutton in firmly. Repeat on remaining pushbuttons.

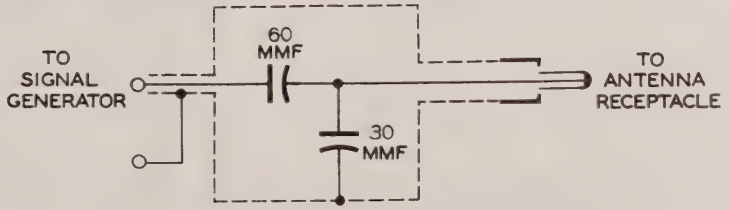


FIG. 1

"The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed."
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PARTS LIST AND DESCRIPTIONS

MOTOROLA MODEL 556

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BD6	Note 1
V2	Converter	6BE6	Note 1
V3	IF Amplifier	6BD6	Note 1
V4	Det-AVC-AF Amplifier	6CR6	Note 1
V5	Output	6AQ5	Note 2
V6	Rectifier	6X4	Note 1

Note 1: Equivalent 12 volt tube type used in model 596-12.
Note 2: 12AB5 used in model 596-12.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■15	350	23A485677	AFH3-104	C077	FP328	TMT-89	T-455	R2274*
B	▲10	350							
C	20	25							

* Non catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2	90		21A591682							
C3	150		21R410112	BPD-00015	DD-151	G046	811-151	UC-5315	5GA-T15	
C4	680		21R410124	BPD-00068	DD-681	TP50	811-681	UC-5368	5GA-T68	
C5	4.7		21R115955	NP0-S14.7	TCZ-4R7	TZ07	NP0A-4R7	ZT-5547	5TCCB-V47	
C6	100		21R120576	N750-S1100	TCN-100	TN22		NT-531	5TCU-T1	
C7	47		21R115593	N750-D147	TCN-47	N033	N750K-470	NT-5447	5TCU-Q47	
C8	400		21A71872							
C9	.05	400	8R121567	BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C10	.05	200	8R121005	BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C11	10000		21R482726	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C12	1000		21R115860	BPD-001	DD-102	K069	801-001	DC521	5HK-D1	
C13	.02	400	8R121566	BPD-02	DF-203	CUB4S2	817-02	PT412	4TM-S2	
C14	.1	200	8R121573	P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C15	10000		21R482726	BPD-01	DD-103	K082	811-01	DC511	5HK-S1	
C16	470		21R114554	BPD-00047	DD-471	K060	811-471	UC-5347	5GA-T47	
C17	470		21R114554	BPD-00047	DD-471	K060	811-471	UC-5347	5GA-T47	
C18	.006	400	8R121001	SI6000	D6-602	CUB6D6	GP3-333-602	PT626	6TM-D6	
C19A	300		21A522033							
B	300									
C20	.02	1000	8R121004	P1088N-02		CUB16S2		PT1612	10TM-S2	Note 1
C21	.5	100	8K122076	VHC36		ST2P5		RF480	68P20	
C22	.5	100	8K122076	VHC36		ST2P5		RF480	68P20	
C23A	300		21A522033							
B	300									
C24	.5	100	8K122076	VHC36		ST2P5		RF480	68P20	Note 2

Note 1: Model 596-12 uses .04MFD (part #8A121549) in this application.
Note 2: Used in model 596-12 only.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1Meg	½	18B531539	F1-55		*QJ-720A	UD1654S	Tone (Panel)
B	250K	½		R4-37				Volume-Tapped@125K (Rear)
C	Shaft			KB-4				Attach to R1A

* Concentrikit Equivalent: K-6 Kit, Base Elements & Shafts; B11-137 & P17-126 (Panel)
B13-130X & R1-207 (Rear) 76-1 Switch

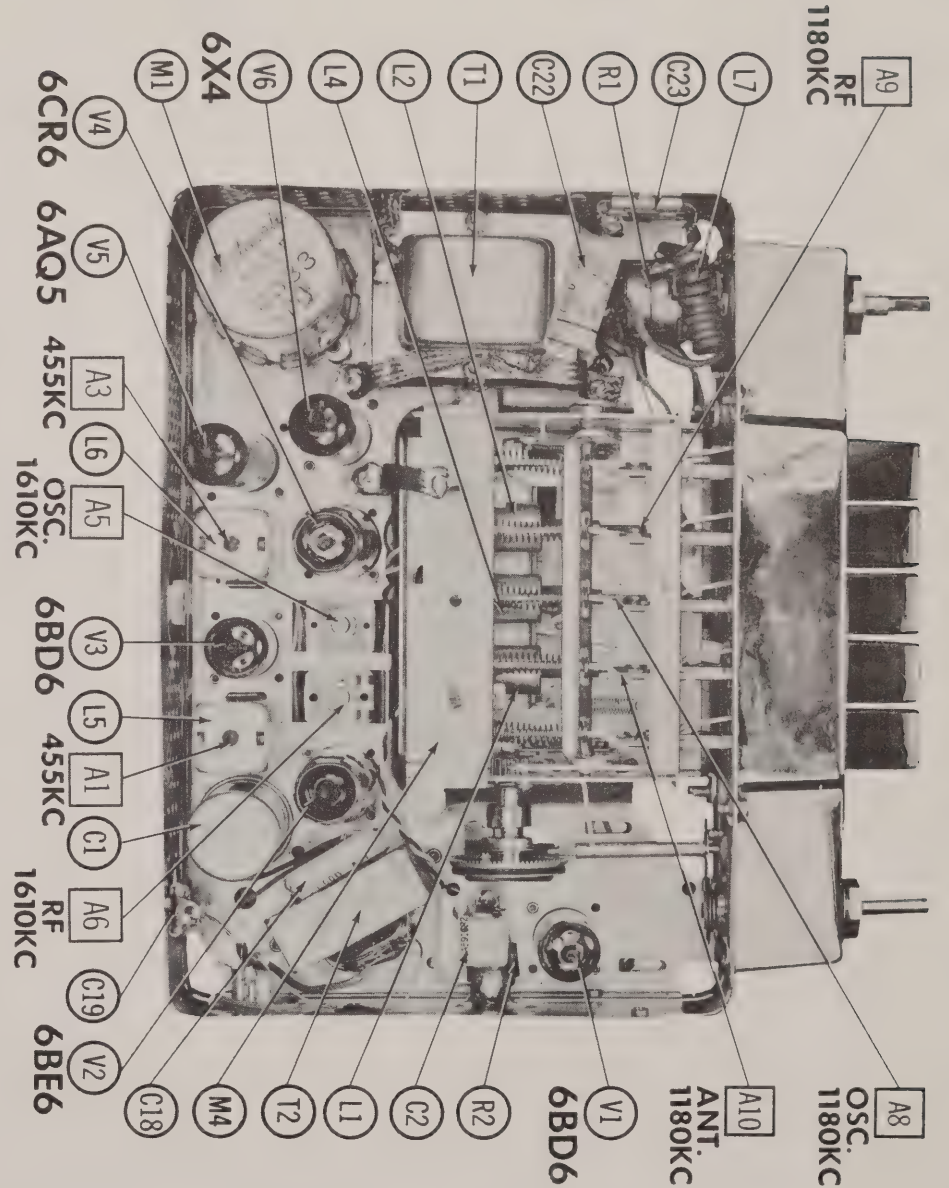
RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	MOTOROLA PART No.	IRC PART No.	NOTES
R2	100K		6R6075	BTS-100K	
R3	1Meg		6R6004	BTS-1Meg	
R4	18K		6R5591	BTS-18K	
R5	560Ω		6R6291	BTS-560	
R6	22K		6R6028	BTS-22K	
R7	10K	2	6R6299	BTB-10K	
R8	330Ω		6R6022	BTS-330	
R9	3.3Meg		6R2118	BTS-3.3Meg	
R10	15K		6R2119	BTS-15K	
R11	2.2Meg		6R3927	BTS-2.2Meg	
R12	1Meg		6R6004	BTS-1Meg	
R13	220K		6R6015	BTS-220K	
R14	270K		6R6414	BTS-270K	
R15	270Ω		6R6432	BTS-270	
R16	4.7Meg		6R2122	BTS-4.7Meg	
R17	2200Ω	2	6R476130	BTB-2200	
R18	56Ω	1	6R2037	BTA-56	Note 1
R19	56Ω	1	6R2037	BTA-56	Note 1

Note 1: Not used in 12 volt models.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (VIBRATOR)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	6.3VCT @ 3A	460VCT @ .047A			25C501303-J 25K538445 ② 25K538446 ③	V3801 ①	P-2970①	P-6478①		V-16K ①

① Drill new mounting holes.
② Used in model 556 and alternate part for model 596.
③ Used in model 596-12.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	5.2K	3-4Ω	25B70171-P	Z1107	A-2930	A-3877	24S51	S-3X	

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	RCA TYPE No.	
SP1	6" X 9"	PM	3-4Ω	50C534258	69A3	238S1	
	6" X 9"	PM	3-4Ω	50C533088 ①	69A3	238S1	① Alternate Part No.
	5" X 7"	PM	3-4Ω	50C522055 ②			② Used in model 556.

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Coil	14Ω		1K538712				Part of M4 (Note 1)
L2	RF Coil	14Ω		1K538712				Part of M4 (Note 2)
L3	Fil. Choke	0Ω		24A522284	19-1001		4604	1.3 Microhenries
L4	Osc. Coil	.7Ω	3.7Ω	1K538711				Part of M4 (Note 3)
L5	Input IF	20Ω	20Ω	24C485553	16-6758	BC-352	12-C1	
L6	Output IF	20Ω	20Ω	24K485554	16-6770	BC-355	12-C6	
L7	Fil. Choke	0Ω		24K522091	19-4125		5221	
L8	Vib. Hash Choke	0Ω		24A532093				Used in Model 596 (Note 4)

Note 1: Alternate part #24K522272 used in tuner #77D522054.
Note 2: Alternate part #24B522271 used in tuner #77D522054.
Note 3: Alternate part #24B522270 used in tuner #77D522054.
Note 4: Part #24A538447 used in model 596-12.
Part #24A533673 used in model 556.

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA				NOTES
				MOTOROLA PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	6.3V	115v	48B3333	5342	903M	5342	Used in models 556, 596
	Interrupter	12.6V	115v	48B522000	6301	G859	6301	Used in model 596-12.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	SFE	9A *	65R16248	9K536617	307009 (SFE9)	155009	SFE9	HRH
		5A	65R122345	9C536545				

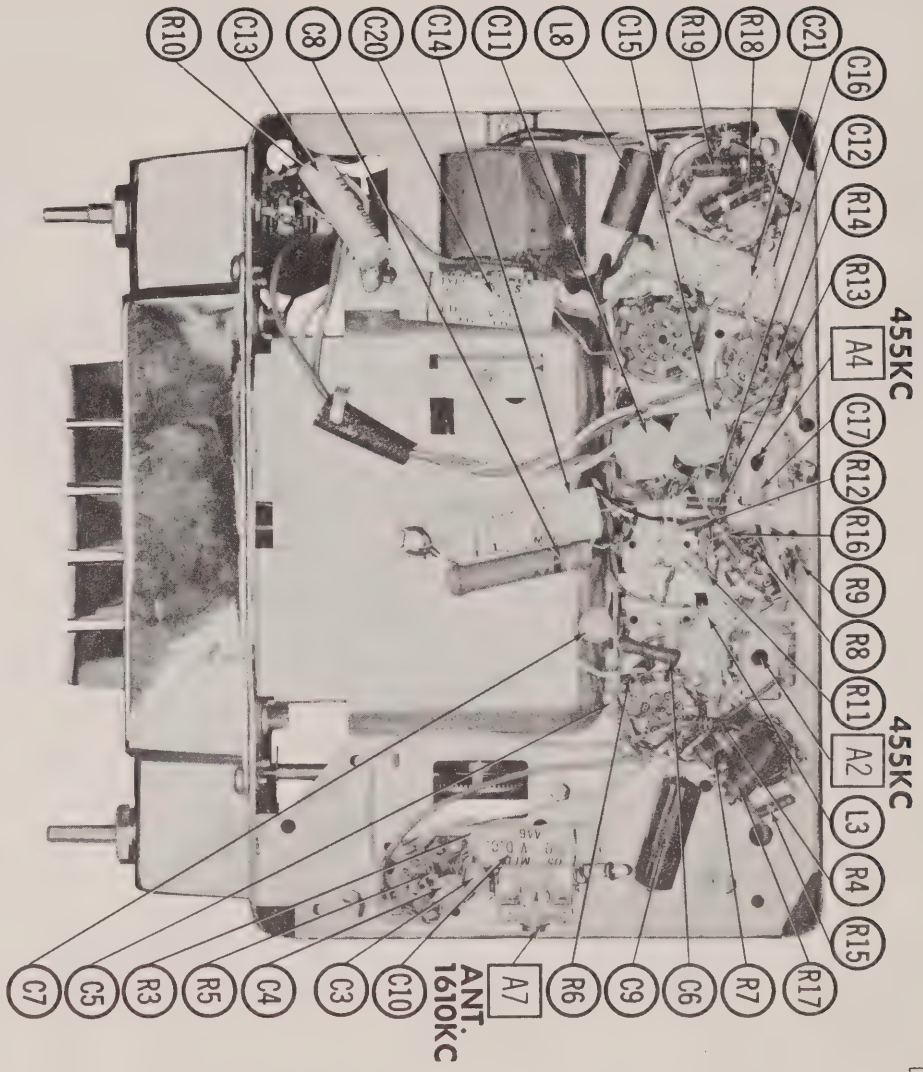
* Used in 6 volt models

MISCELLANEOUS

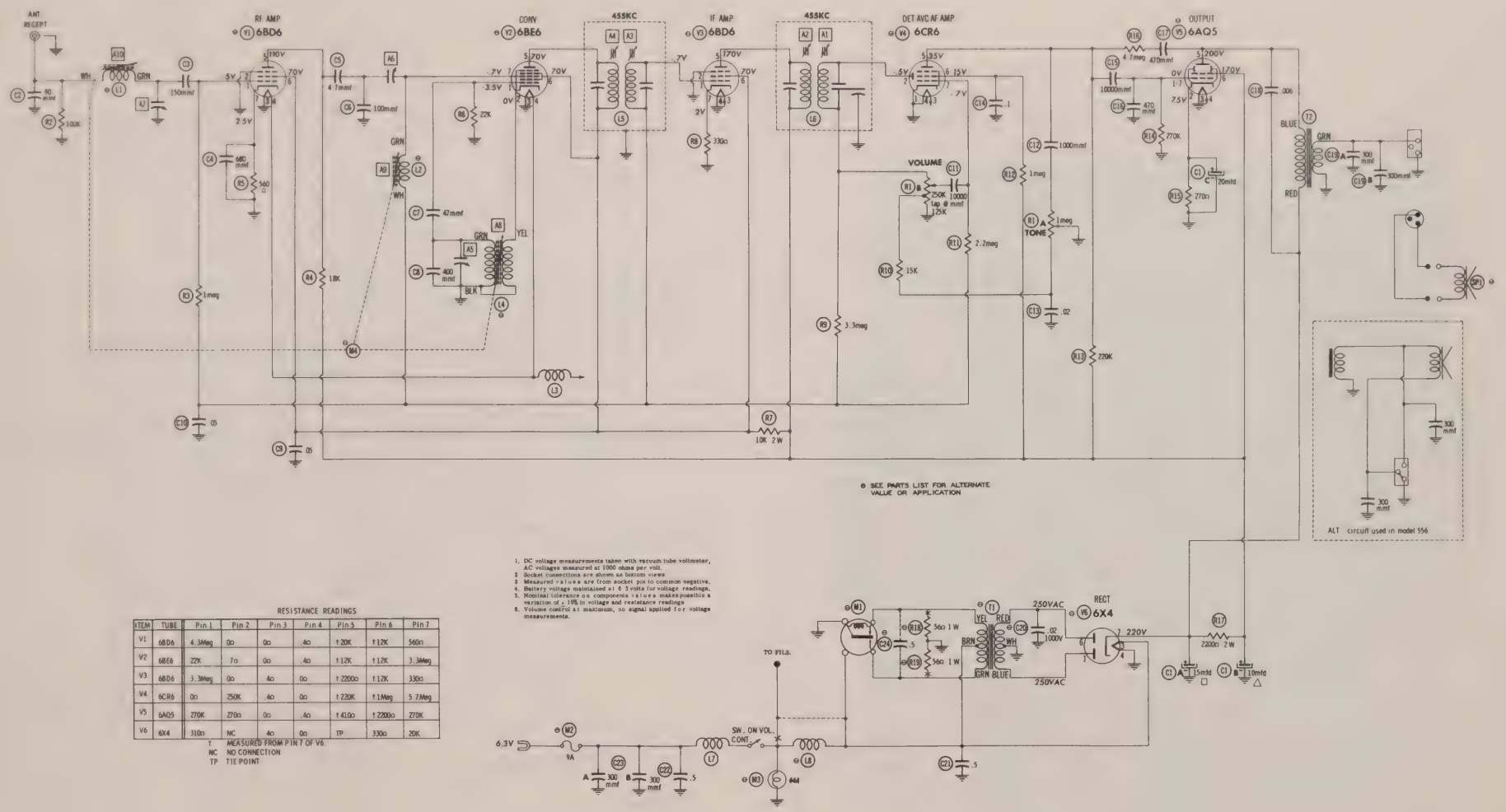
ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M3	Dial Light	65X10867	#44, Models 596, 556.
	Dial Light	65T533821	#1891, Model 596-12.
M4	Tuner	77D535874*	(AT-169) Permeability (Complete). Includes L1, L2 & L4.
A5	Trimmer Cap.	20A77537	Osc. (5-80MMF)
A6	Trimmer Cap.	20A481526	RF (20-180MMF)
A7	Trimmer Cap.	20A513232	Ant. (20-180MMF)

* Alternate tuner part #77D522054 (AT-117)

CHASSIS—BOTTOM VIEW



MOTOROLA MODEL 556



⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

1. DC voltage measurements taken with vacuum tube voltmeter, AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 6.3 volts for voltage readings.
5. Nominal tolerance on components values makes possible a variation of ± 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	6BD6	4.3Meg	0Ω	0Ω	.4Ω	↑20K	↑12K	560Ω
V2	6BE6	22K	7Ω	0Ω	.4Ω	↑12K	↑12K	3.3Meg
V3	6BD6	3.3Meg	0Ω	4Ω	0Ω	↑2200Ω	↑12K	330Ω
V4	6CR6	0Ω	250K	.4Ω	0Ω	↑220K	↑1Meg	5.7Meg
V5	6AQ5	270K	270Ω	0Ω	.4Ω	↑410Ω	↑2200Ω	270K
V6	6X4	310Ω	NC	4Ω	0Ω	TP	330Ω	20K

↑ MEASURED FROM PIN 7 OF V6.
NC NO CONNECTION
TP TIE POINT

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OLYMPIC MODEL 1TJ10U (Ch. "CJ")

TRADE NAME	Olympic	MODELS	CHASSIS
		1CJ20U, 1KJ40U, 1TJ10U	"CJ"
		1CK21U, 1DK17U, 1TK11U	"CK"
		4CN15U	"CN"
MANUFACTURER	Olympic Radio & Television Inc., 34-01 38th. Ave., Long Island City, 1, N.Y.		
TYPE SET	Television		
TUBES	Seventeen		
POWER SUPPLY	110-120 Volts AC-60 Cycle	RATING 1.44 Amp. @ 117 Volts AC	
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)		

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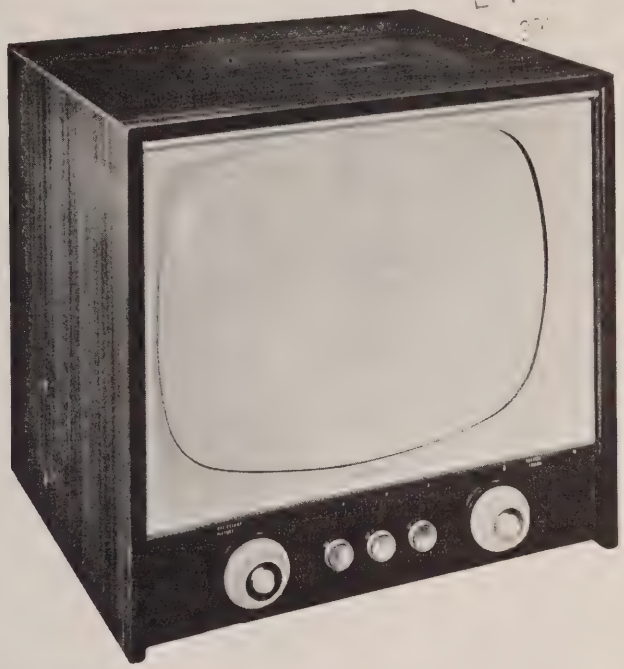

DISASSEMBLY INSTRUCTIONS

CHASSIS REMOVAL

1. Remove 8 push-on type control knobs from front panel of cabinet.
2. Remove 2 metal screws. Remove rear cover.
3. Disconnect speaker plug.
4. Remove 4 chassis bolts. Remove chassis.
5. Remove 2 speaker nuts. Remove speaker.

MODEL	CHASSIS
1TJ10U	"CJ"

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

For touch-up adjustment of VHF tuner oscillator adjustments, it is necessary to remove the chassis from the cabinet. (See disassembly instructions).

PICTURE TUBE SAFETY GLASS CLEANING

Remove 3 wood screws from molding at the top edge of the safety glass. Remove molding and safety glass. Use extreme caution when removing safety glass.

SERVICE ADJUSTMENT LOCATION

See tube placement chart on page 5.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

For adjustment of the horizontal oscillator, it is necessary to remove the rear cover and supply power to set. Adjustment is located on top of chassis. Set the horizontal hold control at the center of its range and adjust the horizontal frequency slug (B1) until picture synchronizes horizontally.

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, adjust the buzz control (R7) for maximum volume and minimum buzz.

FUSES

One fuse is used for horizontal sweep circuit protection. (For location see tube placement chart).

CENTERING

Centering is accomplished mechanically by adjusting two magnetic rings around the neck of the picture tube, located flush against the deflection yoke. Rotate the two rings around the neck of the tube until the picture is properly centered.

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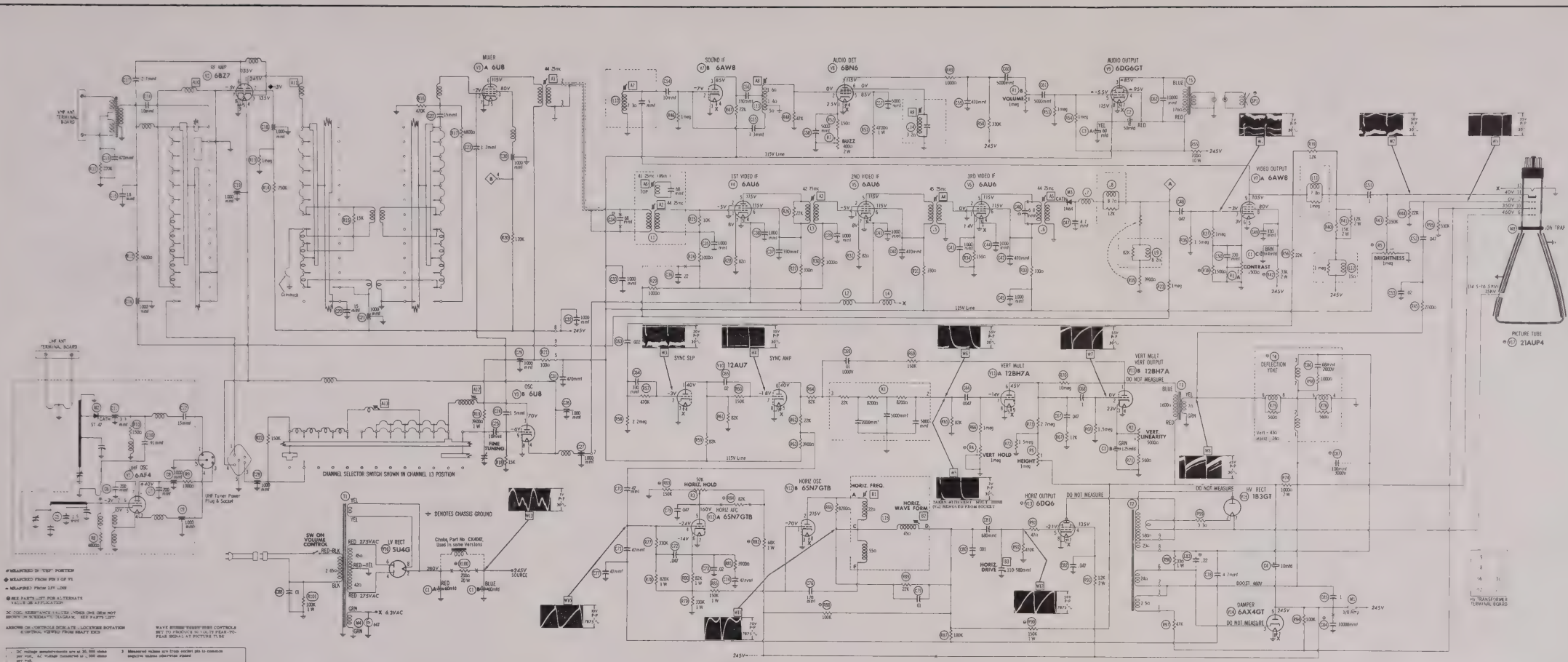

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1KJ40U, 1TJ10U, 1TK11U, 4CN15U (Ch. CJ, CK, CN)

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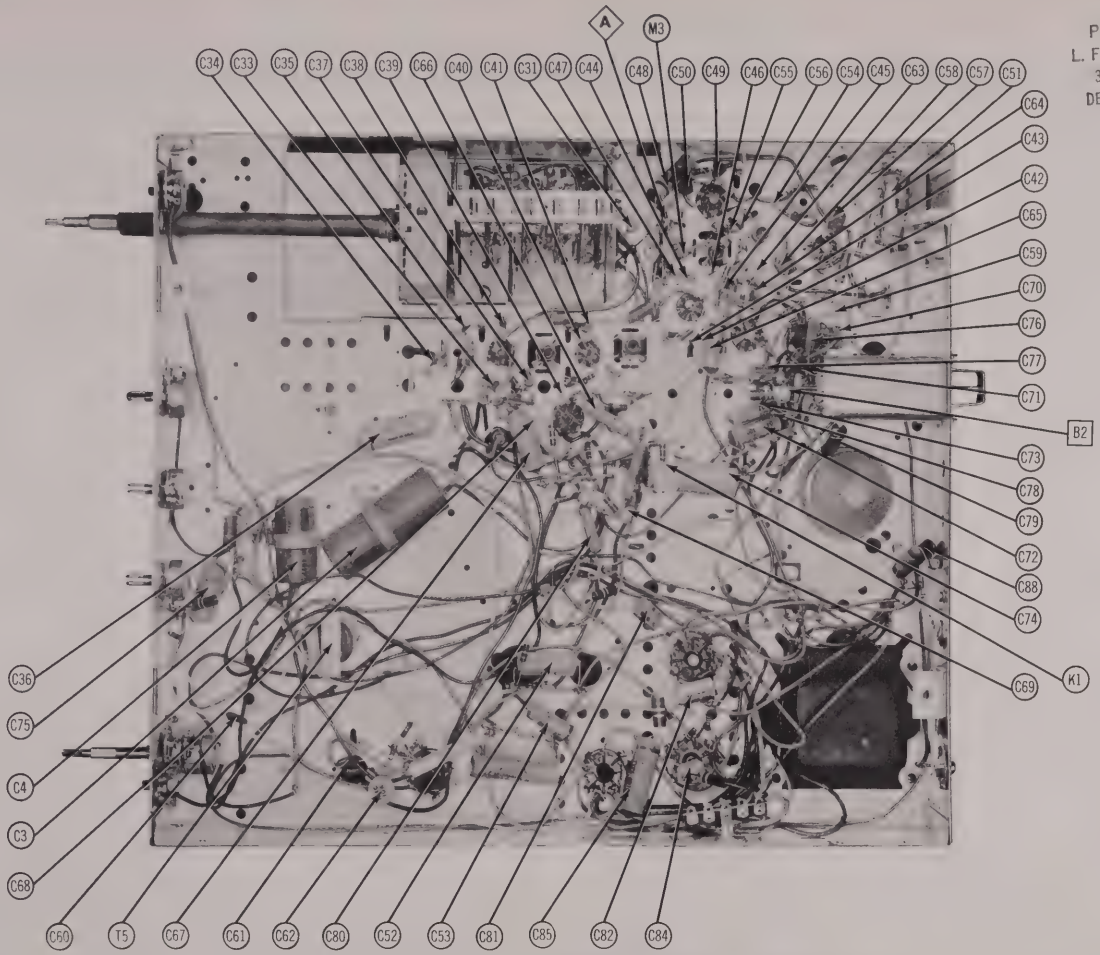
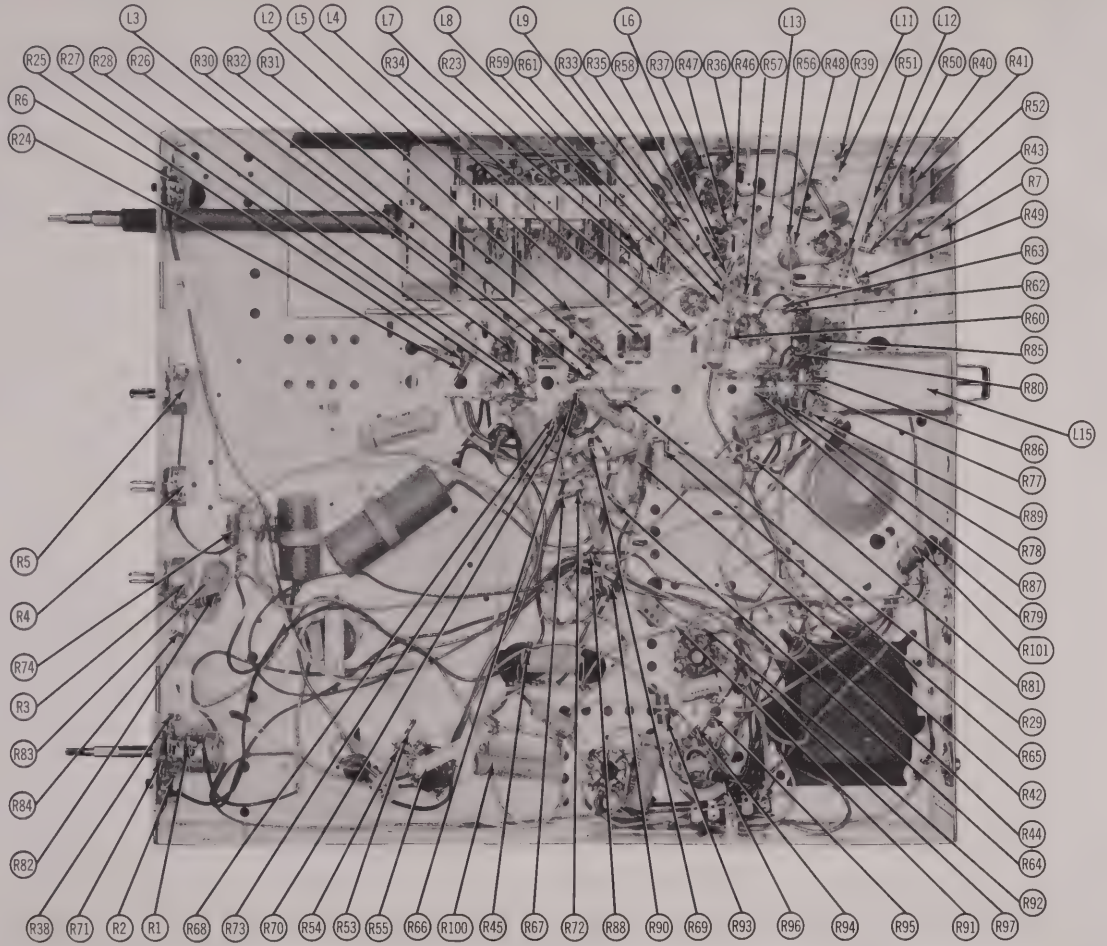
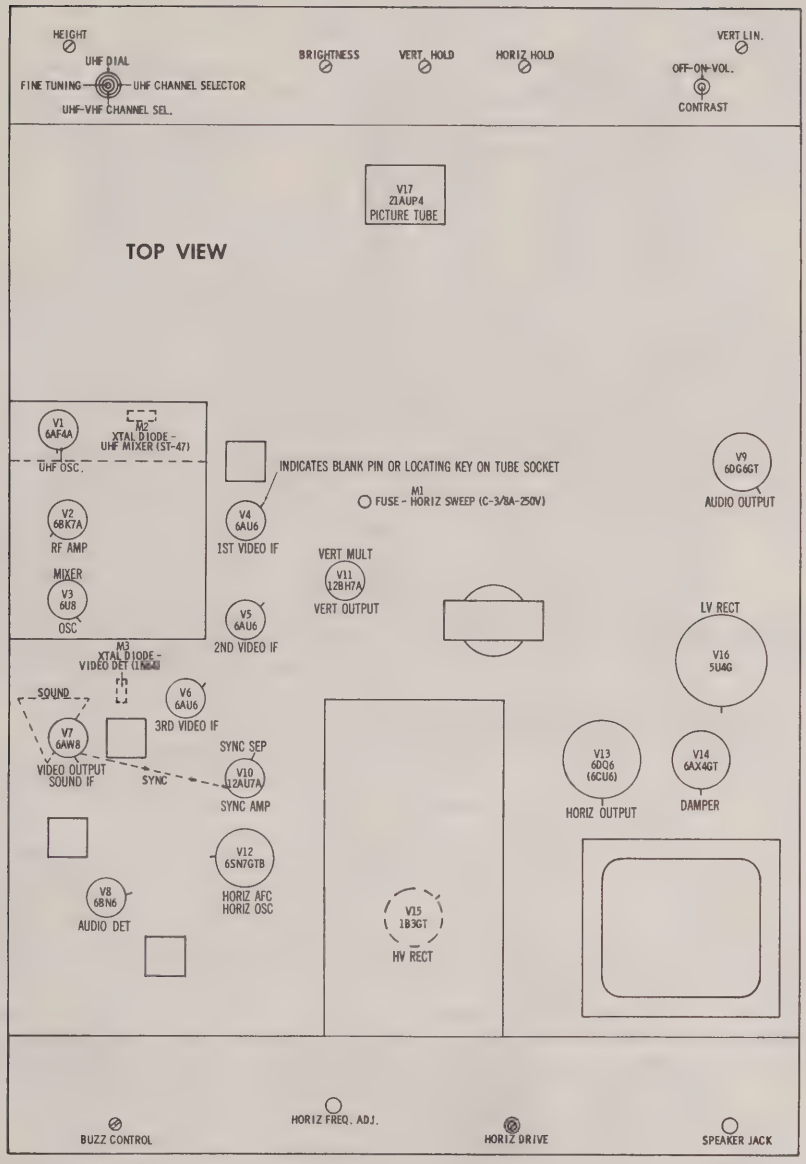


CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

TUBE PLACEMENT CHART



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TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce the indicated symptoms. Refer to tube placement chart for location and type of tube.

POWER SUPPLY FAILURE
No raster, no sound - V16

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - V3, V4, V5, V6, V7, V9 (V1 UHF only)
No pic, no sound, has snow - V2, V3, V4
No pic, has sound, has raster - V7, V17
Has pic, no sound - V7, V8, V9

SYNC FAILURE
No vert. sync - V10, V11
No horiz. sync - V10, V12
No vert. or horiz. sync - V10

SWEEP FAILURE
No raster, has sound - V12, V13, V14, V15, V17, Fuse (M1)
No vertical deflection - V11
Poor vert. linearity or foldover - V11
Poor horiz. linearity or foldover - V12, V13, V14
Narrow picture - V12, V13, V14, V15, V16
Vert. off freq. - V10, V11
Horiz. off freq. - V10, V12

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage lead should be securely taped and kept away from the chassis.
Do not remove the horizontal oscillator tube (V12) to disable the high voltage.

VIDEO IF ALIGNMENT

Use only enough generator output to provide usable indication on VTVM.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
1.	Direct	High side to ungrounded tube shield floating over converter tube. Low side to chassis.	44.25MC	9	DC probe thru 100K to point (A). Common to chassis.	A1, A2	Use only enough generator output to provide usable indication on VTVM. Adjust for maximum deflection.
2.	"	"	42.75MC	"	"	A3	"
3.	"	"	45.25MC	"	"	A4	"
4.	"	"	44.25MC	"	"	A5	"
5.	"	"	41.25MC	"	"	A6	Adjust for MINIMUM deflection.

OVERALL VIDEO IF RESPONSE CHECK

Use only enough sweep generator output to provide usable pattern on scope.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
6.	Direct	High side to ungrounded tube shield floating over converter tube. Low side to chassis.	44.25MC (10MC Swp)	41.25MC 42.5MC 44.1MC 45.7MC	9	Vert. Amp. thru detector probe (Fig. 1) to pin 1 (grid) of 6AU6 (V5). Low side to chassis.		Check for response curve similar to Fig. 2 with markers positioned as indicated. If necessary, retouch A1 and A2 to obtain desired response.
7.	"	"	"	41.25MC 42.5MC 45.75MC	"	Vert. Amp. thru 100K to point (A). Low side to chassis.		Check for response similar to Fig. 3 with markers as shown. If necessary, retouch A3, A4 and A5 to obtain desired response.

SOUND IF ALIGNMENT USING ON THE AIR SIGNAL

Connect the DC probe of the VTVM to pin 2 (Grid) of the 6BN6 (V8), common to chassis. Turn the set on and tune in a strong TV signal. Adjust A7 and A8 for maximum deflection on the VTVM. Disconnect the VTVM from the receiver. Set the buzz control (R7) to its mid-range position. Adjust the quadrature coil slug (A9) for maximum volume. Adjust R7 for maximum volume and MINIMUM buzz. Retouch A7 and A8 for maximum volume.

VHF RF AND MIXER ALIGNMENT

Connect the negative lead of a 3 volt battery to the ungrounded side of C36.
Connect the positive to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
8.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. Amp. thru 10K to point (B). Low side to chassis.	A10, A11	Adjust for response curve similar to Fig. 5 with markers above 90%.

VHF OSCILLATOR ALIGNMENT

Leave bias connected as under "VHF RF And Mixer Alignment".
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Set the fine tuning control to the mid-position of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
9.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC (10MC Swp)	211.25MC 215.75MC	13	Vert. Amp. thru 50K to point (A). Low side to chassis.	A12	Adjust to place sound marker in trap notch as in Fig. 6. Video marker should fall at 50%.
10.	"	"	85MC (10MC Swp)	83.25MC 87.75MC	6	"	A13	"

UHF TUNER ALIGNMENT

This portion of the receiver have been properly aligned at the factory and are very stable. Alignment of this portion should not be required in the field.

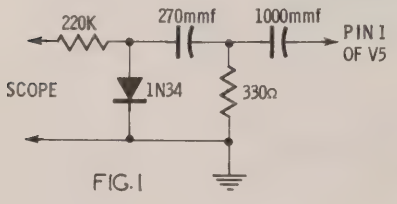

FIG. 1

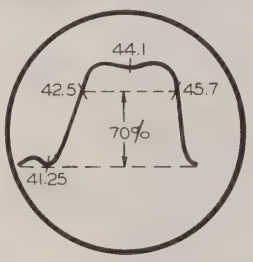

FIG. 2

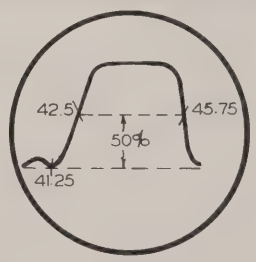

FIG. 3

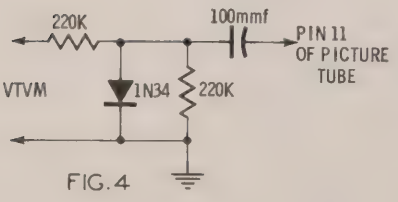

FIG. 4

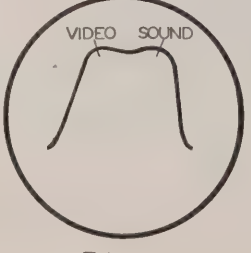

FIG. 5

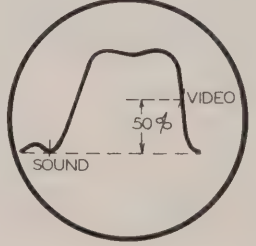

FIG. 6

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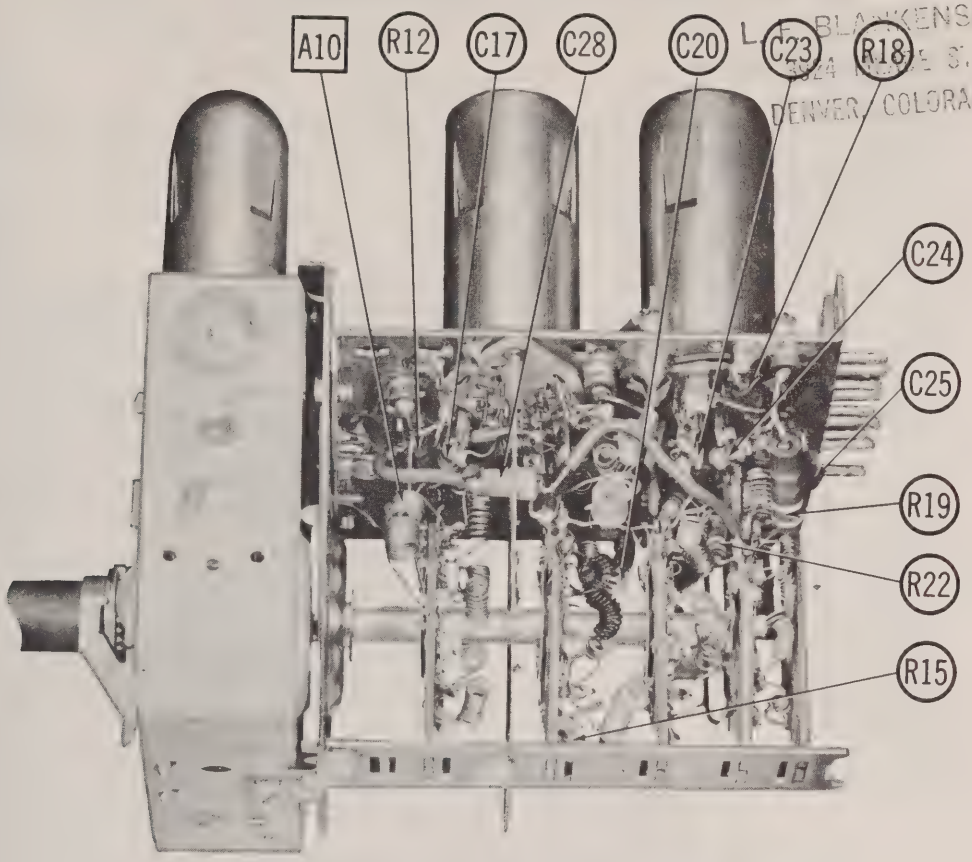
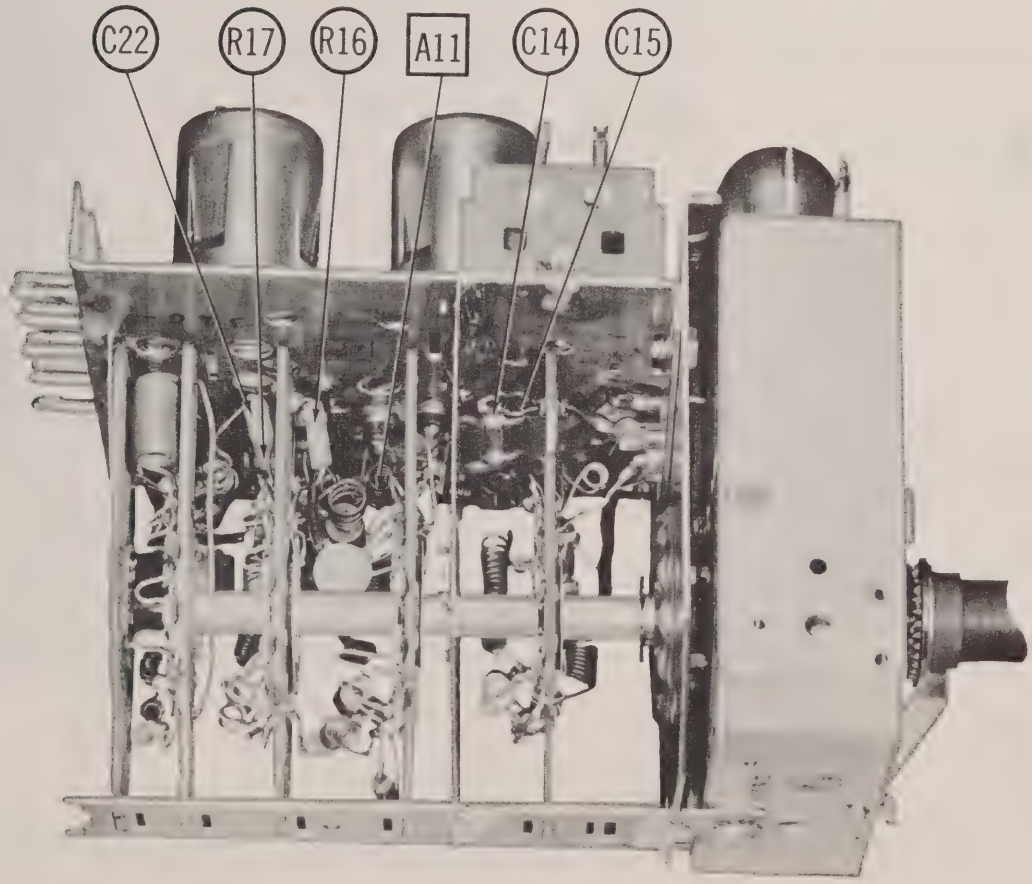


RF TUNER-RIGHT SIDE

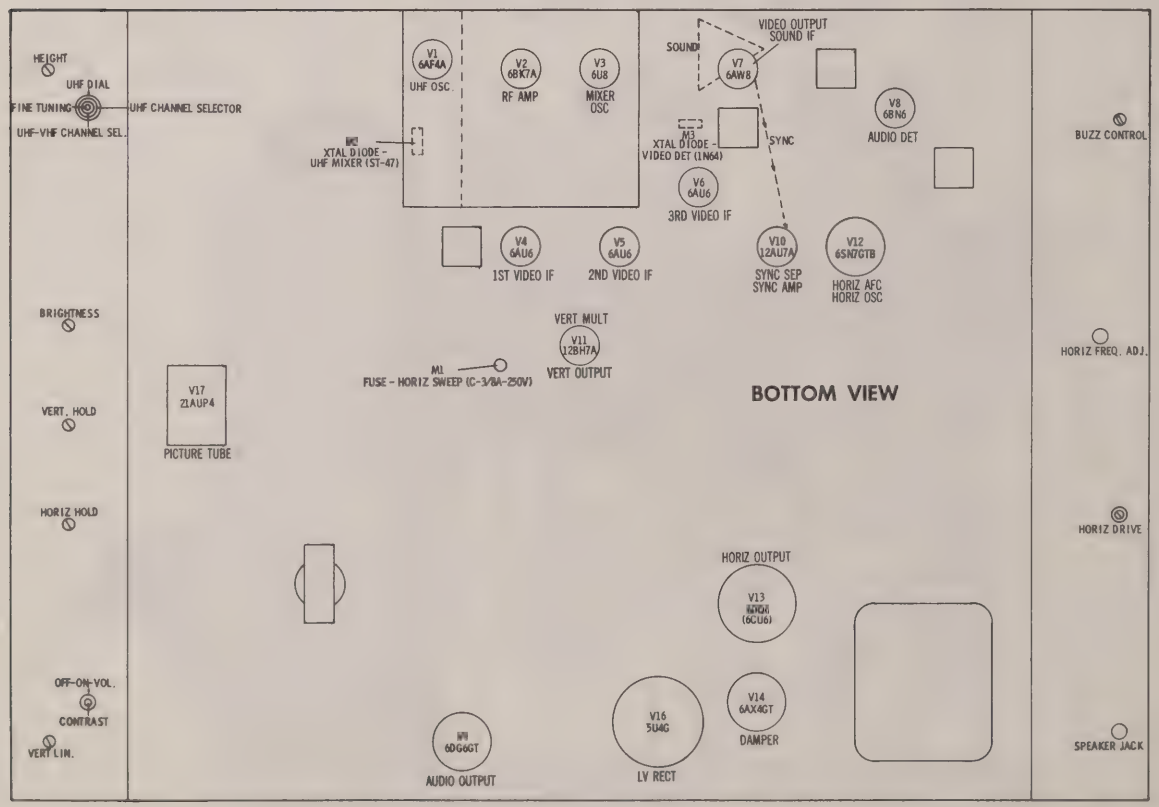


RF TUNER-LEFT SIDE

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6AF4A	■ ‡5000Ω	6800Ω	.1Ω	0Ω	0Ω	6800Ω	■ ‡5000Ω		
V2	6BZ7	† 200Ω	400K	INF	.1Ω	0Ω	INF	1Meg	0Ω	0Ω
V3	6U8	■ 4000Ω	470K	† 120K	.1Ω	0Ω	■ 100Ω	0Ω	0Ω	15K
V4	6AU6	1Meg	0Ω	0Ω	.1Ω	■ 330Ω	■ 330Ω	82Ω		
V5	6AU6	1Meg	0Ω	0Ω	.1Ω	■ 330Ω	■ 330Ω	82Ω		
V6	6AU6	.1Ω	0Ω	0Ω	.1Ω	■ 330Ω	■ 330Ω	150Ω		
V7	6AW8	0Ω	1Meg	■ 22K	.1Ω	0Ω	● 15Ω	600K	† 33K	† 6500Ω
V8	6BN6	● 350Ω	3Ω	0Ω	.1Ω	■ 4700Ω	3.2Ω	† 330K		
V9	6DG6GT	TP	0Ω	† 1000Ω	† 900Ω	500K	NC	.1Ω	50K	
V10	12AU7	■ 60K	2.7Meg	0Ω	.1Ω	.1Ω	■ 20K	200K	0Ω	0Ω
V11	12BH7A	*2500Ω	1.5Meg	● 2500Ω	0Ω	0Ω	*2Meg	● 1.2Meg	0Ω	.1Ω
V12	6SN7GTB	500K	*150K	0Ω	1.5Meg	† 50K	400K	0Ω	.1Ω	
V13	6DQ6	TP	0Ω	NC	† 12K	470K	TP	.1Ω	0Ω	TOP CAP *40Ω
V14	6AX4GT	NC	NC	100K	NC	† 200Ω	NC	.1Ω	0Ω	
V15	1B3GT		PINS	1 - 8	HAVE	INF	RESISTANCE			TOP CAP *620Ω
V16	5U4G	NC	50K	TP	42Ω	TP	45Ω	NC	50K	
V17	21AUP4	0Ω	22K	PIN 6 *15Ω	PIN 10 *40K	PIN 11 ● ■ 300K	PIN 12 .1Ω			

‡ MEASURED IN "UHF" POSITION.
■ MEASURED FROM 115V LINE.
† MEASURED FROM PIN 2 OF V16.
● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
* MEASURED FROM PIN 3 OF V14.
TP TIE POINT
NC NO CONNECTION.



TUBE PLACEMENT CHART

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OLYMPIC MODELS 1CJ20U, 1CK21U, 1DK17U, 1KJ40U, 1TJ10U, 1TK11U, 4CN15U (Ch. CJ, CK, CN)

CHASSIS TOP VIEW

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No	USE	TYPE	NOTES
V1	UHF Oscillator	6AF4A	
V2	RF Amplifier	6BZ7	
V3	Mixer-Oscillator	6U8	
V4	1st Video IF Amplifier	6AU6	
V5	2nd Video IF Amplifier	6AU6	
V6	3rd Video IF Amplifier	6AU6	
V7	Video Output-Sound IF Amp	6AW8	
V8	Audio Detector	6BN6	

ITEM No	USE	TYPE	NOTES
V9	Audio Output	6DG6GT	
V10	Sync Sep -Sync Amp	12AU7	
V11	Vert Mult -Vert. Output	12BH7A	
V12	Horiz AFC-Horiz Osc	6EN7GTB	
V13	Horiz. Output	6DQ6	Note 1
V14	Damper	6AX4GT	
V15	HV Rectifier	1B3GT	
V16	LV Rectifier	5U4G	

Note 1. 6CU6 may be used in some versions

PICTURE TUBE

ITEM No.	REPLACEMENT DATA: OLYMPIC PART No.	CBS PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.	NOTES
V17	21AUP4 21AUP4A	21AUP4 21AUP4A ①	21AUP4A ①	21AUP4A B ② 24CP4A ①	Chassis CJ, CK use 21" tube Chassis CN uses 24" tube ① Aluminized ② Silver screen "B5"
	24CP4A ①	24TP4, 24CP4A ①		24CP4A ①	

ELECTROLYTIC CAPACITORS

ITEM No	RATING: CAP.	VOLT	REPLACEMENT DATA: OLYMPIC PART No.	ARROVOX PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	60	350	C03350	PR3-203	3034 BR435	WT400	WT-100	UT-350 MT-4504	R3065 *
B	60	350							
C	4	350							
C2	30	350	C02066-1	PR3250V50	BR3035	TC59	TD-30-350	FM-2500	TVA-1713
C3A	80	300	C03856	PR3-200	B086	WD340		D-323	R3064 *
B	125	50							
C4	10	450	C04622	PR4504V10	BR1045	ST595	TD-10-450	FM-4510	TVA-1705

* Non-catalog item

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	VOLT	REPLACEMENT DATA: OLYMPIC PART No.	ARROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C5	1.5									
C6	390									
C7	360									
C8	1000			RF-001	MPT-1000				503C-D1	
C9	1000			RF-001	MPT-1000				503C-D1	
C10	.84									
C11	3.3									
C12	15			NPO-D15	TCZ-15	Z021	NPO1K-150		STCC-Q15	
C13	470			BPD-00047	DD-471	K2060	811-471	UC-5247	5GA-T47	
C14	10			NPO-D10	TCZ-10	T2030	NPO1K-100	ZT-541	STCC-Q1	
C15	18				TCZ-18	Z022	NPO1K-180			
C16	1000									
C17	2.7									
C18	1000									
C19	1000									
C20	15			NPO-D15	TCZ-15	Z021	NPO1K-150		STCC-Q15	
C21	1000									
C22	15			NPO-D15	TCZ-15	Z021	NPO1K-150		STCC-Q15	
C23	1.5									
C24	1.5									
C25	10									
C26	1000									
C27	1000									
C28	1000									
C29	1000									
C30	1000									
C31	470		CC0-471M	BPD-00047	DD-471	K2060	811-471	UC-5247	5GA-T47	
C32	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C33	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C34	68			BPD-D68	TCZ-68	Z2035	NPO2-327-S68		STCC-Q68	Note 1
C35	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C36	.33	300		PS68M-33		CUB3P123			27M-P33	
C37	330		CC0-331M	SS330	D6-331	TP43	GPSK-331	UC-5333	5GA-T33	
C38	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C39	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C40	470		CC0-471M	BPD-00047	DD-471	K2060	811-471	UC-5247	5GA-T47	
C41	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C42	470		CC0-471M	BPD-00047	DD-471	K2060	811-471	UC-5247	5GA-T47	
C43	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C44	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C45	1000		CC0-102X	BPD-001	DD-102	K2069	801-001	DC-531	5HX-D1	
C46	1.8		CC0417	TCZ-018	Z2015		NPO4-4R8	ZT-5586	STCCB-Y68	Note 1
C47	4.7		CC0503	TCZ-4R7	Z032		NPOA-4R7	ZT-5567	STCCB-Y47	
C48	.047	400		BPD-03	DF-503	CUB4S47		ZT-5547	47M-S47	
C49	330		CC0-331K	BPD-00033	D31-331	G056	811-331	UC-5333	5GA-T33	
C50	330		CC0-331K	BPD-00033	DD-331	G056	811-331	UC-5333	5GA-T33	
C51	.1	400		P4S8N-1	DF-104	CUB4P1		PT401	47M-P1	
C52	.047	400		BPD-03	DF-503	CUB4S47		PT4147	47M-S47	
C53	.047	400		BPD-03	DF-503	CUB4S47		PT4147	47M-S47	
C54	10		CC0-100K	NPO-D10	TCZ-10	T2030	NPOA-100	ZT-541	5GA-Q1	
C55	2.2		CC0S48	NPO-D2.2	TCZ-2R2	T2020	NPOA-2R2	ZT-5533	STCC-Y23	
C56	330		CC0-331M	BPD-00033	DD-331	G056	811-331	ZT-5333	5GA-T33	
C57	330		CC0-331K	BPD-00033	DD-331	G056	811-331	UC-5333	5GA-T33	
C58	5000		CC0S05	BPD-005	DD-502	K080	811-005	DC-525	5HX-D5	
C59	5000		CC0-502K	BPD-005	DD-502	K080	811-005	DC-525	5HX-D5	
C60	470		CC0-471M	BPD-00047	DD-471	K2060	811-471	UC-5247	5GA-T47	
C61	5000		CC0-502K	BPD-005	DD-502	K080	811-005	DC-525	5HX-D5	
C62	5000		CC0S05	BPD-005	DD-502	K080	811-005	DC-525	5HX-D5	
C63	10000		CC0S10	BPD-01	DD-103	K083	811-01	DC-541	5GX-S1	
C64	.022	600		BPD-063	DE-503	CUB4D3	GPS-333-S05	PT633	47M-D3	
C65	330		CC0-331M	BPD-00033	DD-331	G056	811-331	UC-5333	5GA-T33	
C66	.02	400		BPD-03	DF-203	CUB463	817-03	PT403	47M-S3	
C67	.0047	600		BPD-047	DE-472	CUB4D47	GPS-333-S73	PT6347	47M-D47	
C68	.047	400		BPD-05	DF-503	CUB4S47		PT4147	47M-S47	
C69	.1	400		P4S8N-1	DF-104	CUB4P1		PT401	47M-P1	
C70	47	500		P1S8N-47	DJ-503	CUB4D1		PT5S1	19TM-D1	
C71	47	500		NPO-D47	D6-470	22R5Q47	831-470	ZT-5447	MS-447	
C72	47	500		NPO-D47	D6-470	22R5Q47	831-470	ZT-5447	MS-447	
C73	.047	400		BPD-05	DF-503	CUB4S47		PT4147	47M-S47	
C74	.03	400		BPD-03	DF-303	CUB463	817-03	PT403	47M-S3	
C75	.047	500		P2S8N-47		CUB5P47		PT5047	47M-P47	
C76	.047	400		BPD-05	DF-503	CUB4S47		PT4147	47M-S47	
C78	120	500		NPO-D120	D6-121	22R5T12	811-121		MS-312	

PARTS LIST AND DESCRIPTIONS

CAPACITORS (cont)

ITEM No.	RATING: CAP.	VOLT	REPLACEMENT DATA: OLYMPIC PART No.	ARROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C77	47	500		NPO-D47	D6-470	22R5Q47	831-470	ZT-5447	5TCC-Q47	
C78	4.7			NPO-S4.7	TCZ-4R7	T2007	NPOA-4R7	ZT-5347	5TCCB-Y47	
C79	.01	600		DI-01	D6-103	CUB5E1	GPS-333-103	PT501	47M-D1	
C80	.001	600		1686-001			1R5D1	811-103	MC5-D1	
C81	680	500		S5680	D6-681	5W1T68	811-681	UC-5368	1FM-T68	
C82	.047	400		BPD-05	DF-503	CUB4S47		PT4147	47M-S47	
C83	.22	300		P2S8N-22		CUB3P223		PT3S23	27M-P223	Note 2
C84	10000		CC0-103X	BPD-01	DD-103	K083	811-01	DC-541	5GX-S1	Note 1
C85	.1	400		P4S8N-1	DF-104	CUB4P1		PT401	47M-P1	
C86	68	3000	CC4G1S	HVD-30-680	D2S06-680	Y3Q68	3EY-680	DC30680	30GA-Q68	
C87	100	3000	CC0S1S1	HVD-30-100	D2S0-101	Y3T1	3EY-101	DC3031	30GA-T1	Note 2
C88	.01	600		BPD-01	DE-103	CUB5E1	GPS-333-103	PT511	47M-E1	

Note 1. Not used in some versions.
Note 2. Used in "CN" chassis only.

CONTROLS

ITEM No.	RATING: RESISTANCE	WATTS	REPLACEMENT DATA: OLYMPIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	15000	½	PT4060	F1-7	R7V-581		UF153R	Contrast
B	1Meg			R2-53			UR1AA	Volume
C	Switch			KB-1			UB-2S	Attach to R1B
R2A	50000	½	PT361S-1	BK-10	A47-5000-S	Q11-154	TA5SL	Vert. Linearity
B	Shaft		Not Req.	Not Req.	FKB-1/4	RQ	Not Req.	Attach to R2A
R3A	50K	½	PT361T	AB-51	A47-50K-S	Q11-133	U35	Horiz. Hold
B	Shaft		Not Req.	AK-4	Not Req.	Not Req.	Not Req.	Attach to R3A
R4A	1Meg	½	PT361K	AB-59	A47-1Meg-S	Q11-137	U54	Vert. Hold
B	Shaft		Not Req.	AK-4	Not Req.	Not Req.	Not Req.	Attach to R4A
R4A	1.5Meg	½	PT361L-1	AB-743	A47-1.5Meg-S	Q11-138	U156	Vert. Hold -Note 1
B	Shaft		Not Req.	AK-4	KBB-3	Not Req.	Not Req.	Attach to R4A
R5A	1Meg	½	PT361K	AB-59	A47-1Meg-S	Q11-137	U54	Brightness
B	Shaft		Not Req.	AK-4	Not Req.	Not Req.	Not Req.	Attach to R5A
R5A	1.5Meg	½	PT361L-1	AB-743	A47-1.5Meg-S	Q11-138	U156	Brightness - Note 1
B	Shaft		Not Req.	AK-4	KBB-3	Not Req.	Not Req.	Attach to R5A
R6A	1Meg	½	PT3S6S-1	BK 09	A47-1MegS	Q11-137	TA1SL	Height
B	Shaft		Not Req.	Not Req.	FKB-1/4	RQ	Not Req.	Attach to R6A
R7	400Ω	2	PT36U		39-500		FL-500	Buzz - wire wound

Note 1. Alternate control used in some versions.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING: OHMS	WATT	REPLACEMENT DATA: OLYMPIC PART No.	IRC PART No.	NOTES
R8	6800Ω			BTS-6800	
R9	1000Ω			BTS-1000	
R10	150Ω			BTS-150	
R11	330K			BTS-330K	
R12	6800Ω			BTS-6800	
R13	1Meg			BTS-1Meg	
R14	750K	5%		BTS-750K	5%
R15	15K			BTS-15K	
R16	470K			BTS-470K	
R17	6800Ω			BTS-6800	
R18	15K			BTS-15K	
R19	3900Ω	1		BTA-3900	
R20	120K			BTS-120K	
R21	100Ω			BTS-100	
R22	150K			BTS-150K	
R23	1Meg			BTS-1Meg	
R24	1000Ω			BTS-1000	
R25	10K	5%		BTS-10K	5%
R26	33K				
R27	330Ω			BTS-330	
R28	62Ω			BTS-62	
R29	1000Ω			BTS-1000	
R30	1000Ω			BTS-1000	
R31	330Ω			BTS-330	
R32	82Ω			BTS-82	
R33	330Ω			BTS-330	
R34	150Ω			BTS-150	
R35	1900Ω		GP3K-331	UC-5333	Note 3
R36	1.5Meg			BTS-1.5Meg	Note 4
R37	1Meg			BTS-1Meg	Note 4
R38	150Ω			BTS-150	Note 1
R39	15K			BTS-15K	
R40	15K	2		BTA-15K	
R41	15K	2		BTA-15K	
R42	33K	2		BTA-33K	Note 2
R43	150K			BTS-150K	
R44	33K			BTS-33K	
R45	2700Ω			BTS-2700	
R46	1Meg			BTS-1Meg	
R47	33K			BTS-33K	
R48	47K			BTS-47K	
R49	1000Ω			BTS-1000	
R50	330K			BTS-330K	
R51	4700Ω	1		BTA-4700	
R52	150Ω			BTS-150	
R53	1Meg	5%		BTS-1Meg	5%
R54	1Meg			BTS-1Meg	

ITEM No.	RATING: OHMS	WATT	REPLACEMENT DATA: OLYMPIC PART No.	IRC PART No.	NOTES
R55	700Ω	10	RE2S5S	1.5/4A-700	
R56	33K			BTS-33K	
R57	470K			BTS-470K	
R58	2.2Meg			BTS-2.2Meg	
R59	33K			BTS-33K	
R60	150K			BTS-150K	
R61	82K			BTS-82K	
R62	22K			BTS-22K	
R63	3900Ω			BTS-3900	
R64	82K			BTS-82K	
R65	82K			BTS-82K	
R66	1Meg			BTS-1Meg	
R67	12K			BTS-12K	
R68	1.5Meg			BTS-1.5Meg	
R69	150K			BTS-150K	
R70	10Meg			BTS-10Meg	
R71	56Ω			BTS-56	
R72	1.5Meg			BTS-1.5Meg	
R73	2.7Meg			BTS-2.7Meg	
R74	100Ω	3		BTB-1000	
R75	560Ω				
R76	560Ω				
R77	560Ω				
R78	820K	1			
R79	330K	5% 1			
R80	33K	5% 1			
R81	3900Ω				
R82	39K				Note 3
R83	15K				Note 4
R84	82K				Note 4
R85	150K	5% 1			
R86	820Ω				
R87	180K				
R88	100K				
R89	33K				
R90	15K	1		BTA-150K	Note 7
R91	47K			BTS-47K	
R92	470K			BTS-470K	
R93	12K	2			
R94	100K				
R95	330K				
R96	33Ω	1			
R97	47K			BTS-47K	
R98	2000Ω				
R99	3.3Ω		RE44J9	SW4-3.3	
R100	20Ω	20	RS2S49	2D-200	
R101	100K	1		BTA-100K	

Note 1. Some versions use a 1000Ω in this application.
Note 2. In chassis CN, a 47K, 2 watt is used in this application.
Note 3. In chassis CJ, a 47K, 1 watt is used in this application.
Note 4. In chassis CN, a 330K is used in this application.
Note 5. Not used in some versions.
Note 6. In chassis CN, a 150K is used in this application.
Note 7. In chassis CN, a 100K, 1 watt is used in this application.
Note 8. Not used in chassis CN.

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	SEC. 1	SEC. 2	SEC. 3	OLYMPIC PART No.	REPLACEMENT DATA: Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC	550VCT	5VAC	6.3VAC	TR4007	P9733 ①	P-5836 ① ②	P-8164 ①	28S33 ①	R-41BC ① ② ④
	① 1.44A	② .190A	③ 5A	④ 7.6A						

① Drill new mounting holes.
② Tap 6.3V@1.2A winding.
③ Parallel and phase 6.3V @ 5A windings.
④ Tape low HV winding. Tape 5V @ 5A winding. Parallel and phase 6.3V @ 5A windings.

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA: OLYMPIC PART No.	Halldorson PART No.	Merit PART No.	RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T3	Horiz. Output Trans.	TR3509-3	FB4U ②	RVO-9 * ②	32S71 * ④	X36S * ②	A-8255 * ②	FLY-16 * ②	D-19 * ② ④
T5	Vert. Output Trans.	TR3689	21S00 ①	A-5089 ①	V31X ① ④	26S46 ① ④	A-8161 ① ④	A-104X ① ④	
T4A	Yoke (70°) Horiz. (19.5MM)	CL8547 ③	DF90S ③	MDF-71 ③	32S21 ③	Y70F20/43 ③	DY-11A ③	DY-10 ③	Y-33-1 ③
T4A	Yoke (90°) Horiz. (16.5MM)	CL8500 ③	DF607 ③	MDF-92 ③	32SD1 ③	Y90F16/43 ③	DY-16A ③	Y-16 ③	Y-41-1 ③
T6	Vert. (41MM)								

① Drill new mounting hole(s)
② Use 18 in turns ratio.
③ Connect blue lead to plate (pin 1 of V11) Connect red lead of transformer to yellow lead of yoke. Remove green lead of yoke from ground and connect it and green lead of transformer to junction of capacitor C48 and resistors R86, R74 and R90.
④ Used in chassis CJ and CK.
⑤ Used in chassis CN only.
⑥ Connect horizontal yoke damping network across terminals # 3 and #7. Use original if necessary.
⑦ Remove capacitor from terminals #1 and #2.
* This part may be superceded by Parts Manufacturer's introduction of special unit for this application.

★HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

Use Original Width Coil Unless Replacement Type Is Listed

ORIGINAL TERMINAL (CONNECTIONS)	Halldorson Replacement Connections	Merit Replacement Connections	RCA Replacement Connections	Ram Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
9	9	9	9	9	9	9	9
8	8	8	8	8	8	8	8
6 & 7	6 & 7	7	7	7	7	7	7
3	3	3	3	3	3	3	3
1	1	1	1	1	1	1	1
					5		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE: PRI.	SEC.	REPLACEMENT DATA: OLYMPIC PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	3.4K	3-4Ω	TR3766-1	E1U01	A-5021	A-8332	28H58 ①	S-15X	① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS: SIZE	FIELD	V. C. IMP.	REPLACEMENT DATA: OLYMPIC PART No.	QUAM PART No.	RCA TYPE No.	NOTES
SP1	4"	PM	3-4Ω	SK4343 ①	4A07	23S81	① Used in Models 17J10U and 17K11U
	5"	PM	3-4Ω	SK7168-2 ①	5A07	20S62	② Used in Models 1CJ20U, 1CK21U,
	8"	PM	3-4Ω	SK2903-2 ①	8A21	23S61	1DK17U and 4CN15U
							③ Used in Model 1KJ40U

COILS (RF-IF)

ITEM No.	USE	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA: OLYMPIC PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	Ist. Video IF	0Ω	.3Ω	CL8853-1				Includes 41.25MC trap
L2	Fil. Choke	0Ω		CL2427	19-1001		6004	1.4 Microhenries
L3	2nd. Video IF	.1Ω	.1Ω	CL4511	19-4523	TV-120	6219	
L4	Fil. Choke	0Ω		CL2427	19-1001		6004	1.4 Microhenries
L5	3rd. Video IF	.1Ω	.1Ω	CL4511	19-4523	TV-120	6219	
L6	4th. Video IF	.1Ω	.1Ω	CL4511	19-4524	TV-130	6219	
L7	Series Peaking Coil	.1Ω		CL4325	19-1001		6004	1.7 Microhenries
L8	Series Peaking Coil	9.7Ω		CL1548	19-3180 *	TV-184 *	6180 *	180 Microhenries, wound on 1ZK resistor
L9	Shunt Peaking Coil	6.2Ω		CL1587	19-4180	TV-183	6179	180 Microhenries, wound on 2BK resistor
L10	4.5MC Trap	7.3Ω		CL2614				
L11	Series Peaking Coil	7.8Ω		CL2403	19-3300 *	TV-180 *	6159 *	300 Microhenries, wound on 1ZK resistor
L12	Shunt Peaking Coil	18Ω		CL2614	19-3300 *	TV-180 *	6174 *	300 Microhenries, wound on 1ZK resistor Tapped ④ .5Ω & 1.4Ω
L13	Sound IF	3.5Ω		CL4021	17-5413			
L14	Quadrature Coil	9.2Ω		CL2902-1			1481	

* Parallel with 1K resistor.
+ Parallel with 1Meg resistor.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES. PRI.	DC RES. SEC.	REPLACEMENT DATA: OLYMPIC PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.	Thordarson PART No.	NOTES
L15	52Ω	55Ω	TR3294	20-1602 *	TV-162 *	6183 *	20S81 *	K-100 *	28-3 *	Waveform winding -46Ω

* Reverse coil mounting in can.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	OLYMPIC PART No	REPLACEMENT DATA
K1	Vert. Integrator	22K, 9200Ω, 8200Ω, 2000MMF, 5000MMF, 500MMF	PC3435	Arrovox PA-1D Centralab PC-100 Cornell-Dubilier 15TM1 Erie 1603-01 Sprague V-1

OLYMPIC MODELS 1CJ20U, 1CK21U, 1DK17U, 1KJ40U, 1TJ10U, 1TK11U, 4CN15U (Ch. CJ, CK, CN)

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

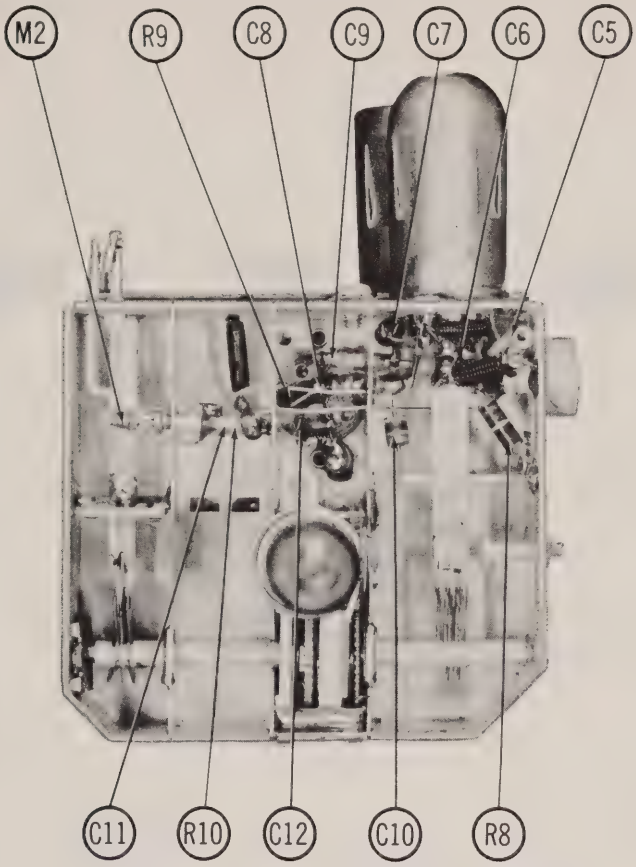
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			OLYMPIC PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	"C"	3/8A 250V	FU4345	FH4344	332.375 ("C" 3/8A)	346002	"C" 3/8	HC 3/10 to 1/2

CRYSTAL DIODES

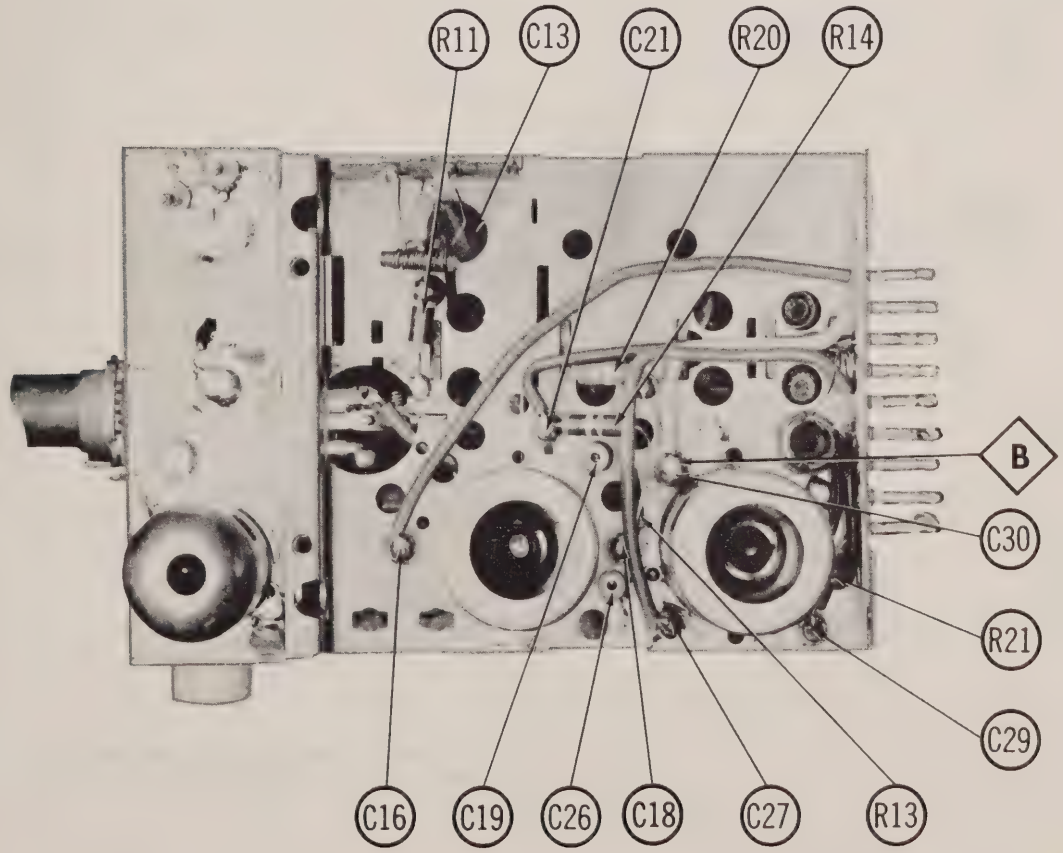
ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		OLYMPIC PART No.	SYLVANIA PART No.	
M2	ST-47		1N82 or 1N82A	UHF Mixer (Clip in)
M3	1N64	1N64	1N60	Video Det. (Pigtail)

MISCELLANEOUS

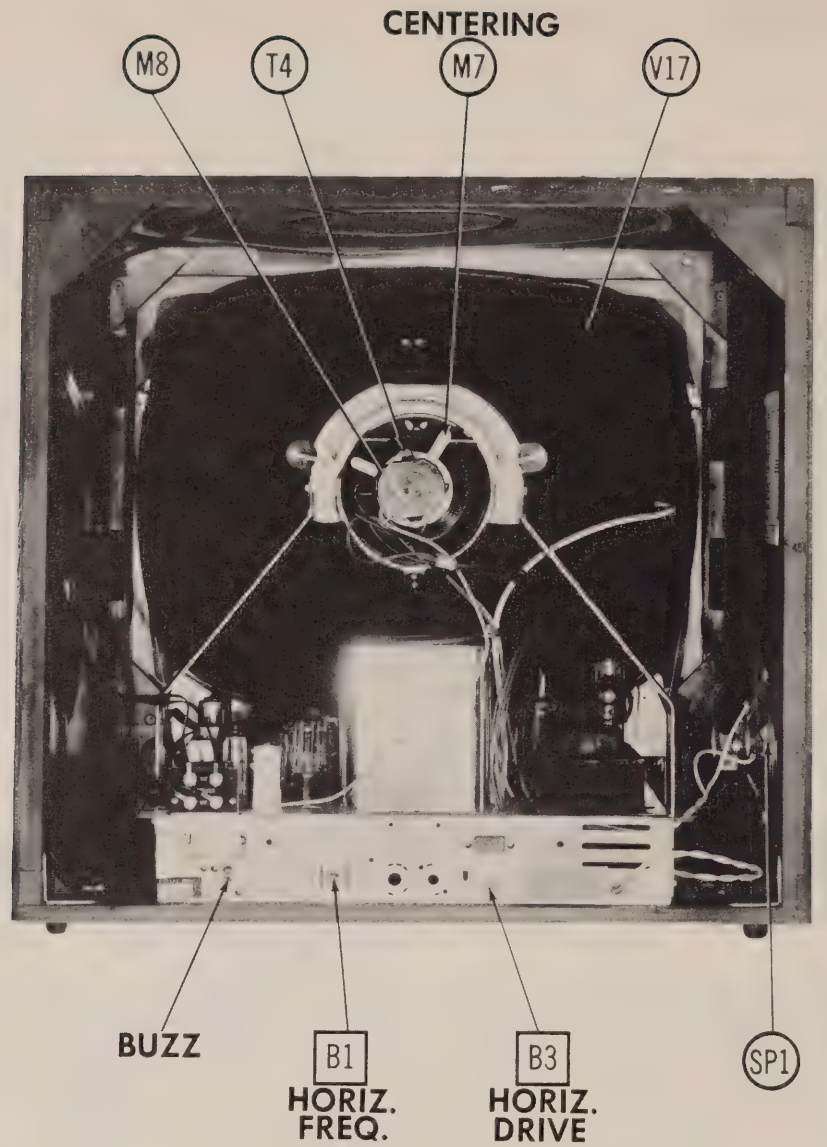
ITEM No.	PART NAME	OLYMPIC PART No.	NOTES
M4	Dial Light	BU187	#47
M5	Tuner	CL4416	VHF-UHF combination
M6	Focus Magnet	PP4418	Includes centering device, chassis CN only
M7	Centering Device	PP2763	Chassis CJ and CK
M8	Ion Trap	PP2623	Chassis CJ and CK
	Ion Trap	PP2248	Chassis CN only
B3	Trimmer Cap.	CT3526	Horiz. Drive (110-580MMF)
	Cabinet	CA4327	Models 1TJ10U, 1TK11U
	Cabinet	CA4332	Model 1KJ40U
	Cabinet	CA4341	Models 1CJ20U, 1CK21U
	Cabinet	CA4372	Model 4CN15U
	Cabinet	CA4502	Model 1DK17U
	Knob	KN4024	On-off-volume
	Knob	KN4025	Picture
	Knob	KN4026	Channel selector (VHF)
	Knob	KN4027	Fine tuning
	Knob	KN4028	Vernier
	Knob	KN4407	Control (3 used)
	Safety glass	PP3656	Models 1CJ20U, 1KJ40U, 1TJ10U
	Safety glass	PP3656-1	Models 1CK21U, 1DK17U, 1TK11U
	Safety glass	PP3939	Model 4CN15U
	Mask	PP3938	Model 4CN15U
	Mask	PP3646-1	Models 1TJ10U, 1CK20U
	Mask	PP3646-2	Model 1KJ40U



UHF TUNER FRONT VIEW



RF TUNER TOP VIEW



CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably a test pattern. Connect a short jumper across terminals "C" and "D" of the horizontal oscillator transformer coil (L15).

Set the horizontal hold control fully clockwise. Adjust the horizontal frequency slug (B1) until the picture falls into sync. Remove the jumper from terminals "C" and "D" of L15. Connect the high side of vertical amplifier of scope thru a 5MMF to terminal "C" of L15. Low side to chassis.

Adjust the horizontal waveform slug (B2) for a waveform similar to Fig. 7 with broad and narrow peaks of equal height.

If necessary during adjustment of B2, keep picture in sync with horizontal hold control or B1.

Remove scope and retouch B1 for the following conditions:

1. At full clockwise position of the horizontal hold control a blanking bar or picture jitter should be evident.

2. At full counter clockwise position of horizontal hold control, picture should lose sync with 4½ to 5 diagonal bars sloping downward to the left. If picture remains in sync at either extreme setting of horizontal hold control, switch off channel and back again so that picture falls out of sync.

Adjust the horizontal drive trimmer (B3) counter clockwise as far as possible without the presence of vertical white lines or compression near the center of the picture. If neither of these indications appear, adjust B3 for a picture slightly wider than necessary to fill the picture mask horizontally.

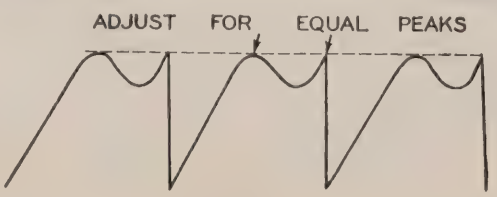
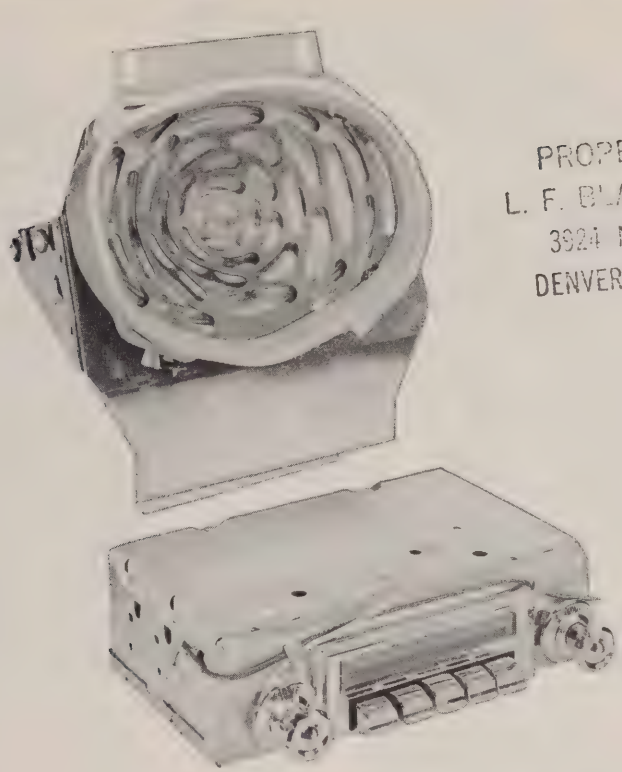


FIG. 7

RETMA MEMBER

PACKARD MODEL 7267427 (480487)

PACKARD MODEL 7267427 (480487)



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DENVER, COLORADO

PACKARD MODEL 7267427 (480487)

TRADE NAME	Packard Model 7267427 (480487) (For 1956 Packard Clipper Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Ind.
TYPE SET	Battery Operated Custom Built AM Superheterodyne Automobile Receiver
TUBES (Seven)	Types 12BA6 RF Amplifier, 12BE6 Converter, 12AU6 IF Amplifier, 12BF6 Det-AFC-AF Amp., (2) 12V6GT Output, 0Z4 Rectifier
POWER SUPPLY	12 Volt Storage Battery — RATING 3.4 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540KC - 1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting. Tone control to treble.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to pin 7 (grid) of 12BE6 (V2). Low side to chassis.	262KC (400∿ Mod)	High frequency end stop.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	82MMF	High side thru 82MMF to antenna receptacle. Low side to chassis.	1615KC	"	"	A5, A6, A7	Check mechanical setting of A8. The rear of core should be 1 25/32" from mounting end of coil form. If necessary, make this adjustment and reseal core. Adjust A5, A6 and A7 for maximum output.
3.	"	"	1000KC	Tune to 1000KC signal.	"	A9, A10	Adjust for maximum output.
4.	"	"	1615KC	High frequency end stop.	"		Retouch A6 and A7 for maximum output
5.	"	"	900KC	Tune to 900KC signal.	"		If necessary, adjust dial pointer with pointer adjustment screw so dial pointer coincides with 900KC marker on dial.
6.	With radio installed in car and antenna fully extended, tune in a weak station between 600KC and 1000KC, adjust A7 for maximum volume.						

PUSHBUTTON ADJUSTMENT

Pull pushbutton to the right and out. Tune manually to desired station. Press pushbutton in firmly. Repeat on remaining pushbuttons.

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PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BA6	
V2	Converter	12BE6	
V3	IF Amplifier	12AU6	
V4	Det-AVC-AF Amp.	12BF6	
V5	Output	12V6GT	
V6	Output	12V6GT	
V7	Rectifier	0Z4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■20	400	M-908	AFH3-120	C099	FP345.8	TMT-106	T-550	TVL-3678
B	▲20	400							
C	20	25							

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2	.05	200	6512	BPD-05	DF-503	CUB2S5		PT415	2TM-S5	
C3	15		6361	BPD-000015	DD-150	G021	831-150	UC-5415	5GA-Q15	
C4	39		6366	DI-000039	DD-390	Z031	831-390		5TCC-Q39	
C5	180		7257424							
C6	.05	400	6512	BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C7	10	500	6359	BPD-00001	DD-100	22R5Q1	831-100	MCB215	MS-41	
C8	.01	400	6510	BPD-01	D6-103	CUB4S1	GP3-333-103	PT411	4TM-S1	
C9	220	500	6375	DI-00022	D6-221	22R5T22	811-221		MS-322	
C10	2000		6528	BPD-002	DD-202	K072	801-002	DC522	5HK-D2	
C11	.003	400	6529	BPD-003	D6-302	CUB6D3	GP2-333-302	PT623	6TM-D3	
C12	.1	400	6513	P488N-1	DF-104	CUB4P1		PT401	4TM-P1	
C13	100	500	6371	BPD-0001	D6-101	22R5T1	801-101	MCB235	MS-31	
C14	.003	1000	H-302	P1088N-003	DD16-302	CUB16D3		PT1623	10TM-D3	
C15	.007	1600	H-702	P1688N-007	DD16-702	CUB16D7		PT1627	16TM-D7	
C16	.47	100	725906	VHC36		ST2P5		RF480	68P20	
C17	.47	100	725906	VHC36		ST2P5		RF480	68P20	

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	2Meg	½	7267632	F1-68	RTV-561C	♦QJ1022A	UF2A	Tone (Panel)
B	300K	½		R2-38			UR354-T74†	Volume-Tap② 50K (Rear)
C	Switch			KB-4			US-26†	Attach to R1B
D	Bushing			AK-27	XB-1		EB-214†	Attach to R1A

† Universal replacement (Mallory exact duplicate part no. UE1738S)

♦ Concentrikit equivalent: K-8 Kit; Base elements and shafts, B13-139, P14-102 (Panel) B18-132X, R16-118 (Rear) 76-1 (Switch)

RESISTORS

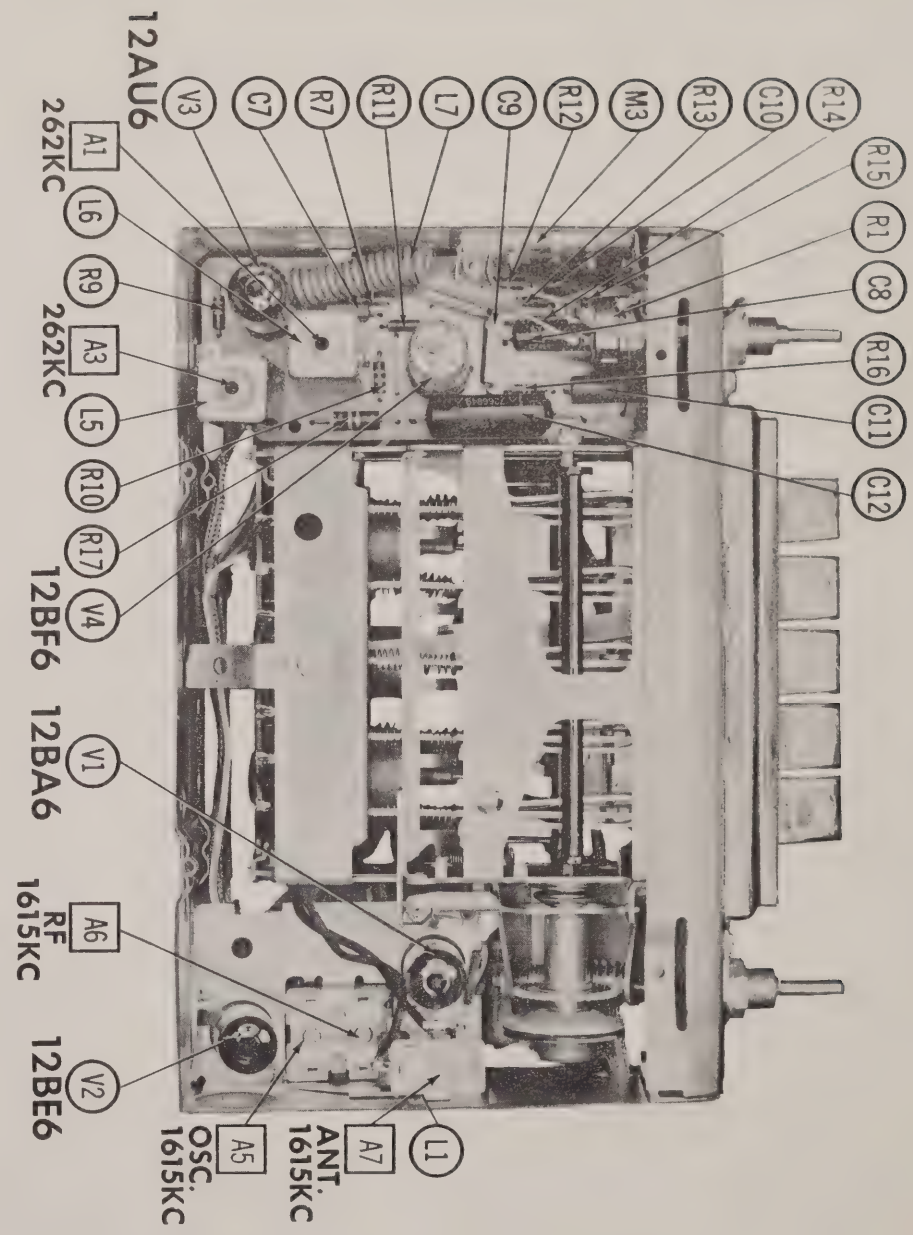
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA DELCO PART No.	IRC PART No.	NOTES
R2	2.2Meg		1239	BTS-2.2Meg	
R3	15K		1253	BTS-15K	
R4	68Ω		1111	BTS-68	
R5	22K		1215	BTS-22K	
R6	330K		1229	BTS-330K	
R7	1Meg		1235	BTS-1Meg	
R8	15K	2	1277	BTB-15K	
R9	270Ω		1118	BTS-270	
R10	47K		1219	BTS-47K	
R11	1Meg		1235	BTS-1Meg	
R12	2200Ω		1129	BTS-2200	
R13	1000Ω		1125	BTS-1000	Note 1
R14	1Meg		1235	BTS-1Meg	
R15	820K		1234	BTS-820K	
R16	82K		1222	BTS-82K	
R17	47K	1	1259	BTA-47K	
R18	360Ω 5%	1	7234563	BW1-360 5%	
R19	1800Ω	2		BW2-1800	Note 2
R20	15K	1	1253	BTA-15K	

Note 1: Some versions use 1800Ω in this application.

Note 2: Mfgr. states to replace with 2700Ω (part #1204) and 5600Ω 1W (part #1171) wired in parallel.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (VIBRATOR)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	12.6VCT @1.3A	550VCT @.062A			6067	V3902	P-2861	P-6489	22R52	V-31

TRANSFORMER (AUDIO INPUT)

ITEM No.	RESISTANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	1.8K CT		6061				20A29		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T3	7.1K	3-4Ω	6063	Z1009	A-2936	A-3852	24S61	S-15X	

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	RCA TYPE No.	
SP1	6" X 9"	PM	3-4Ω	6111	69A2	238S1	

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	DELCO PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Coupling Coil	.7Ω		7255738	19-1005		4612	
L2	Ant. Coil	10Ω		7258914				
L3	RF Coil	10Ω		7258914				
L4	Osc. Coil	1.1Ω	4.6Ω	7258911				
L5	Input IF	33Ω	33Ω	1220888				
L6	Output IF	35Ω	35Ω	1220889				
L7	Fil. Choke	0Ω		1217846				
L8	Vib. Hash Choke	.1Ω		7265389				

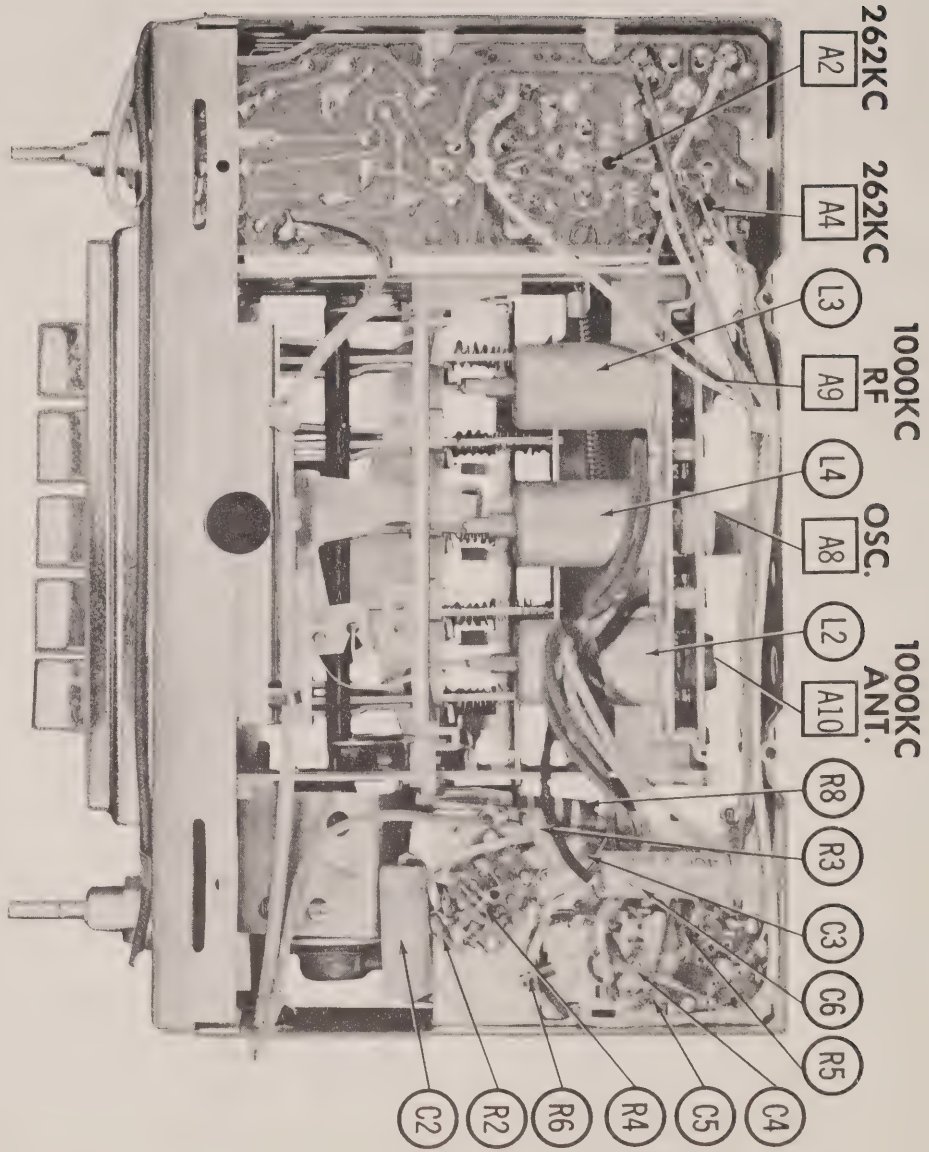
VIBRATOR

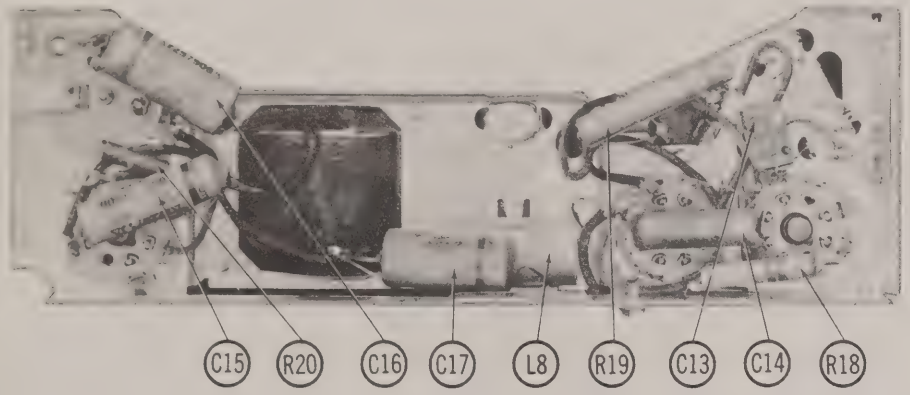
ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA				NOTES
				DELCO PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6V	115~	8550	6330	883	6330	

MISCELLANEOUS

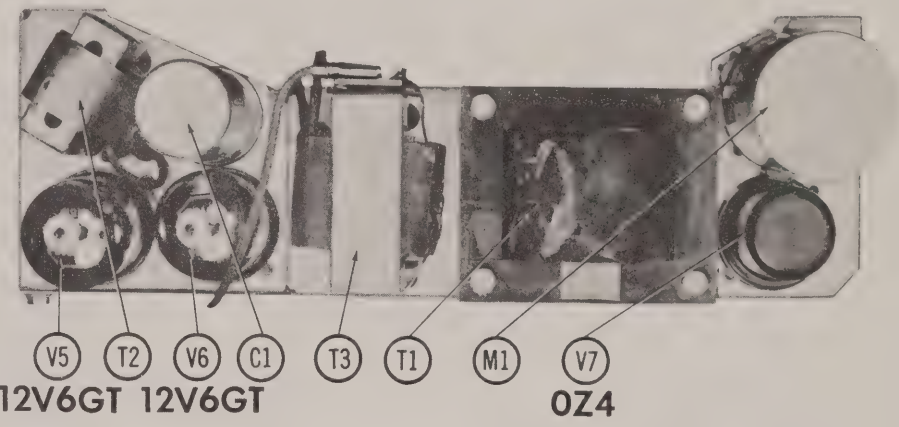
ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Dial Light	1220308	#57
M3A	Spark Plate		
B	Spark Plate		
	Trimmer Cap.	7242454	Dual: Osc. (A5), RF (A6)
	Trimmer Cap.	7265255	Ant. (A7)
	Dial Glass	7267710	
	Dial Pointer Tip	1220897	
	Pushbutton & Slide Assembly	1220731	5 Used

CHASSIS—BOTTOM VIEW

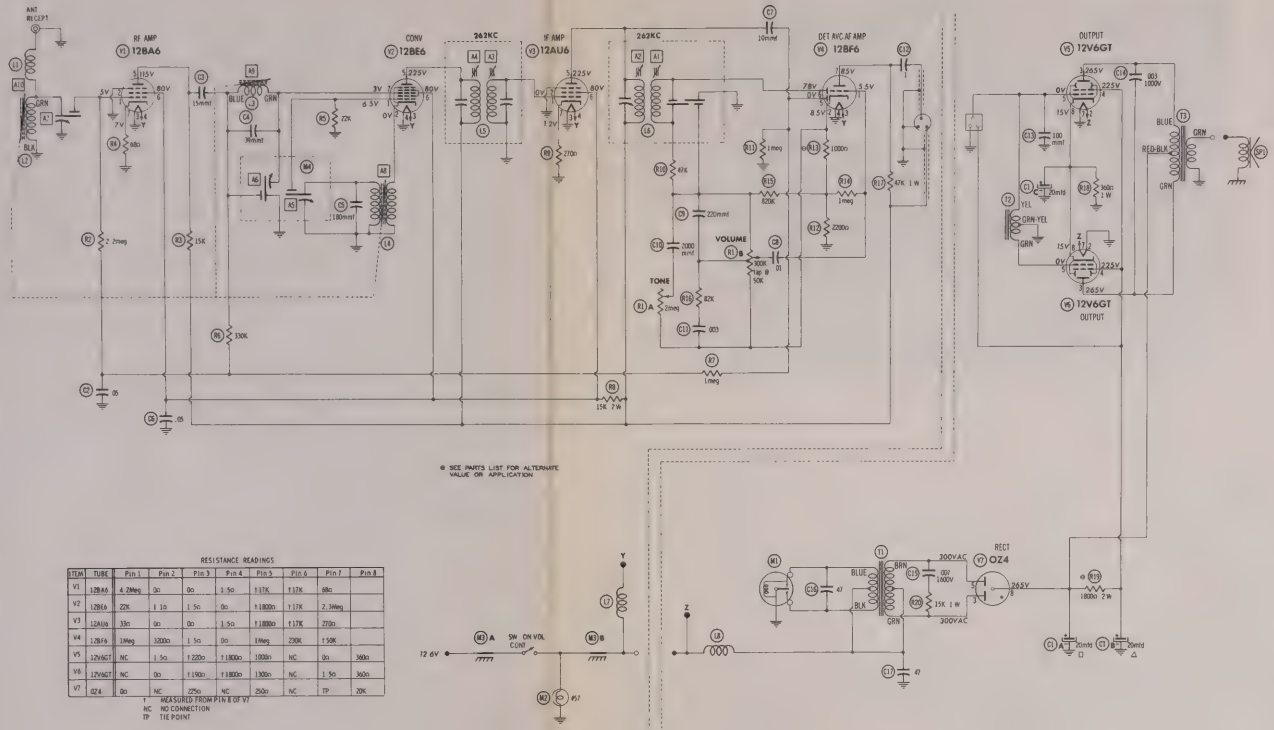




POWER SUPPLY CHASSIS-BOTTOM VIEW



POWER SUPPLY CHASSIS-TOP VIEW



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	12BA6	4.2Meg	0Ω	0Ω	1.5Ω	↑17K	↑12K	68Ω	
V2	12BE6	22K	1.1Ω	1.5Ω	0Ω	↑1800Ω	↑17K	2.3Meg	
V3	12AU6	33Ω	0Ω	0Ω	1.5Ω	↑1800Ω	↑17K	270Ω	
V4	12BF6	1Meg	3200Ω	1.5Ω	0Ω	1Meg	230K	↑50K	
V5	12V6GT	NC	1.5Ω	↑220Ω	↑1800Ω	1000Ω	NC	0Ω	360Ω
V6	12V6GT	NC	0Ω	↑190Ω	↑1800Ω	1300Ω	NC	1.5Ω	360Ω
V7	0Z4	0Ω	NC	225Ω	NC	250Ω	NC	TP	20K

↑ MEASURED FROM PIN 8 OF V7
NC NO CONNECTION
TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter, AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative
4. Battery voltage maximized at 13.8 volts for voltage readings.
5. Nominal tolerance on components values exists possible a variation of ± 10% in voltage and resistance readings
6. Volume control at maximum, no signal applied for voltage measurements.

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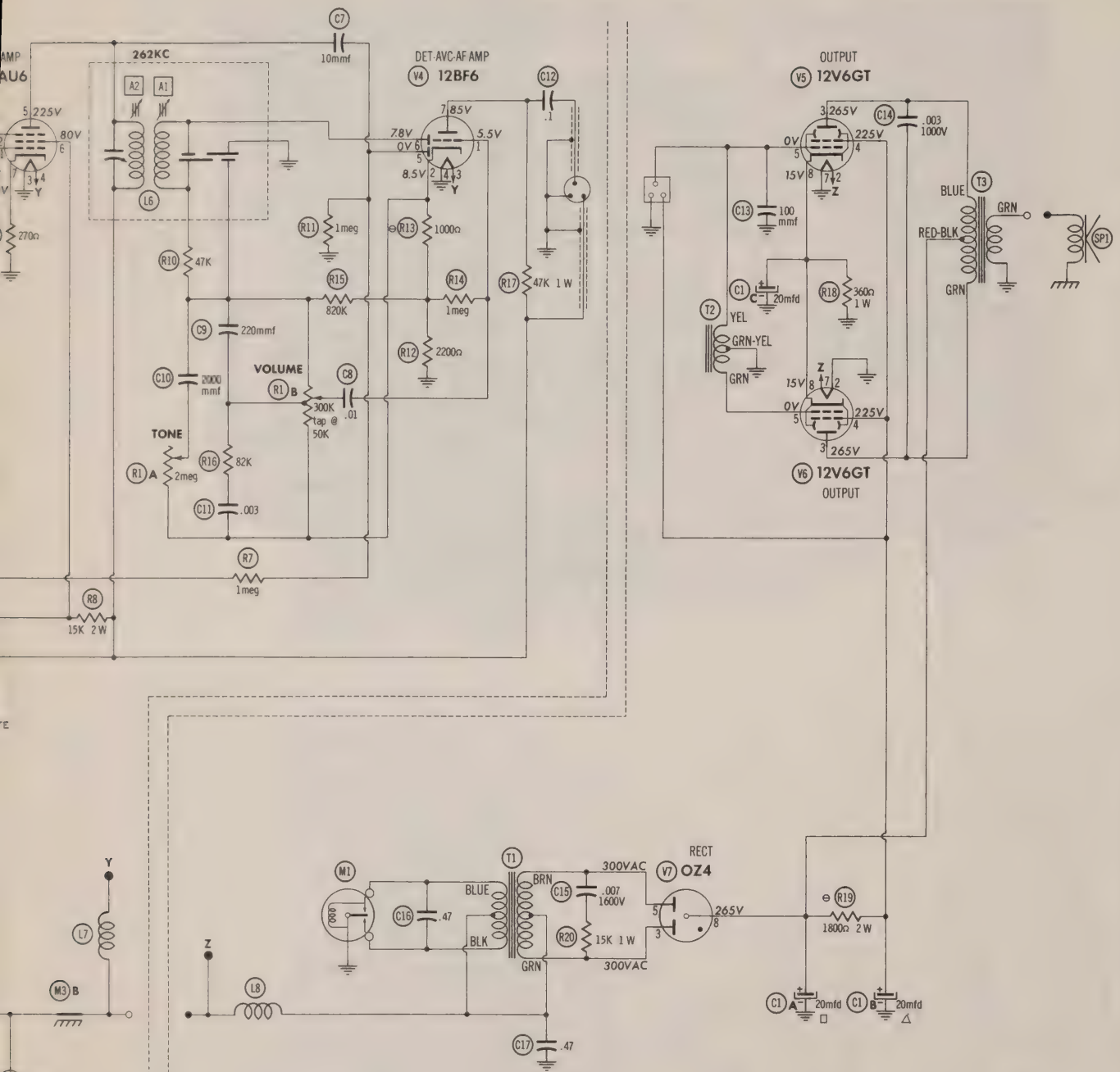
262KC
A2
A1
L6
C7
10mmf
DET-AVC-AF AMP
V4 12BF6
C12
.1
7 85V
7.8V
0V 6
5
8.5V 2 4 3 Y
5.5V 1
R11 1meg
R13 1000Ω
R10 47K
R15 820K
R14 1meg
R17 47K 1 W
C9 220mmf
R12 2200Ω
C10 2000 mmf
VOLUME
R1 B
300K tap @ 50K
C8 .01
TONE
R1 A 2meg
R16 82K
C11 .003
R7 1meg
R8 15K 2W
OUTPUT
V5 12V6GT
3 265V
C14 .003 1000V
0V 5
225V 4
15V 8 7 2 Z
C13 100 mmf
C1 C 20mfd
R18 360Ω 1 W
T2
YEL
GRN-YEL
GRN
T3
BLUE
GRN
RED-BLK
GRN
SP1
V6 12V6GT
OUTPUT
M1
T1
BLUE
BRN
BLK
GRN
C16 .47
C15 .007 1600V
R20 15K 1 W
300VAC
300VAC
RECT
V7 OZ4
265V
R19 1800Ω 2W
C1 A 20mfd
C1 B 20mfd
L7
M3 B
L8
C17 .47

PHOTOFACT* Folder

*TRADE MARK

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

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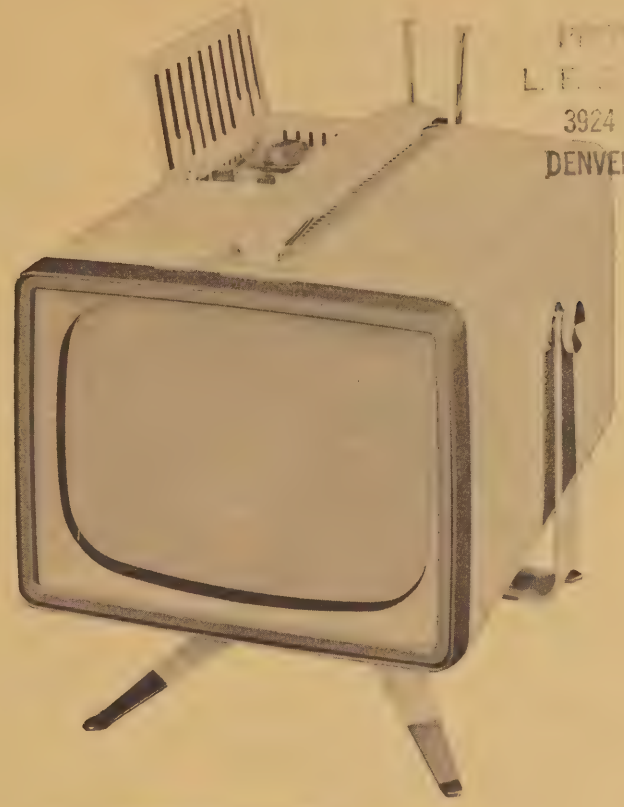

RCA VICTOR MODEL 8-PT-7034

TRADE NAME	RCA Victor Models 8-PT-7030, 8-PT-7031, 8-P-7032, 8-PT-7034 (Ch. KCS100B)
MANUFACTURER	Radio Corporation of America, RCA Victor Television Div., Camden 8, N.J.
TYPE SET	Television Receiver
TUBES	Eleven
POWER SUPPLY	110-120 Volts AC-60 Cycle RATING .8 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)

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RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

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DATE 11-56 SET 336 FOLDER 14

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

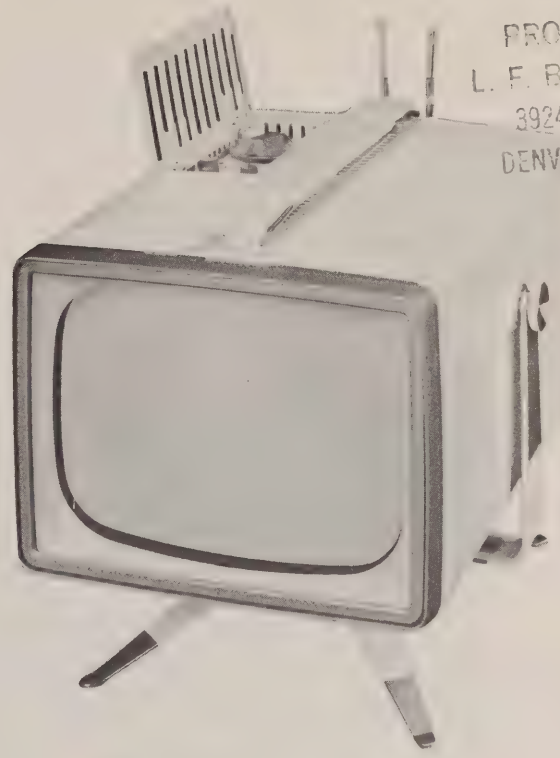
PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

DISASSEMBLY INSTRUCTIONS

The chassis must be removed from the cabinet to replace tubes and perform certain adjustments. Adjustments for vertical linearity, height, focus, width and horizontal drive are accessible from the bottom of the cabinet.

CHASSIS REMOVAL

1. Remove the receiver from the stand.
2. Remove the 2 knurled screws at the sides of the cabinet.
3. Remove 7 push-on type control knobs from top panel of cabinet.
4. Remove 3 metal screws holding cover and case assembly.
5. Take-off the carrying handle by removing 2 metal screws.
6. Remove 1 metal screw at the bottom front of cabinet.
7. Slide entire assembly from cabinet front.



MODEL	CHASSIS
8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034	KCS100B

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

SERVICING IN THE FIELD

TUNER OSCILLATOR ADJUSTMENTS

Touch-up adjustments of the VHF tuner oscillator circuit may be made by removing 7 push-on type control knobs and 3 metal screws holding case assembly to cabinet.

PICTURE TUBE SAFETY GLASS CLEANING

For picture tube safety glass cleaning, it is necessary to remove chassis. (See disassembly instructions).

SERVICE ADJUSTMENT LOCATION

See tube placement chart on page 11.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

The horizontal hold (L15) is located on the control panel of the chassis. If horizontal sync cannot be brought in by adjustment of the horizontal hold, set it at approximately its mid-range position and adjust the horizontal waveform slug (B1).

SOUND IF DETECTOR BUZZ ADJUSTMENT

To eliminate sound IF detector buzz, adjust the ratio detector secondary (L13) located on bottom of chassis but can be reached thru the top core.

FUSES

One fuse is used for horizontal sweep circuit protection. (For location see tube placement chart).

CENTERING

Centering is accomplished mechanically by adjusting two discs mounted in back of the deflection yoke. To center picture, place a small screwdriver in the teeth of one of the discs and rotate one disc with respect to the other. To shift the picture in a desired direction, rotate both discs simultaneously. By alternately rotating one disc with respect to the other, then rotating the entire assembly around the neck of the picture tube, proper centering of the picture can be obtained.

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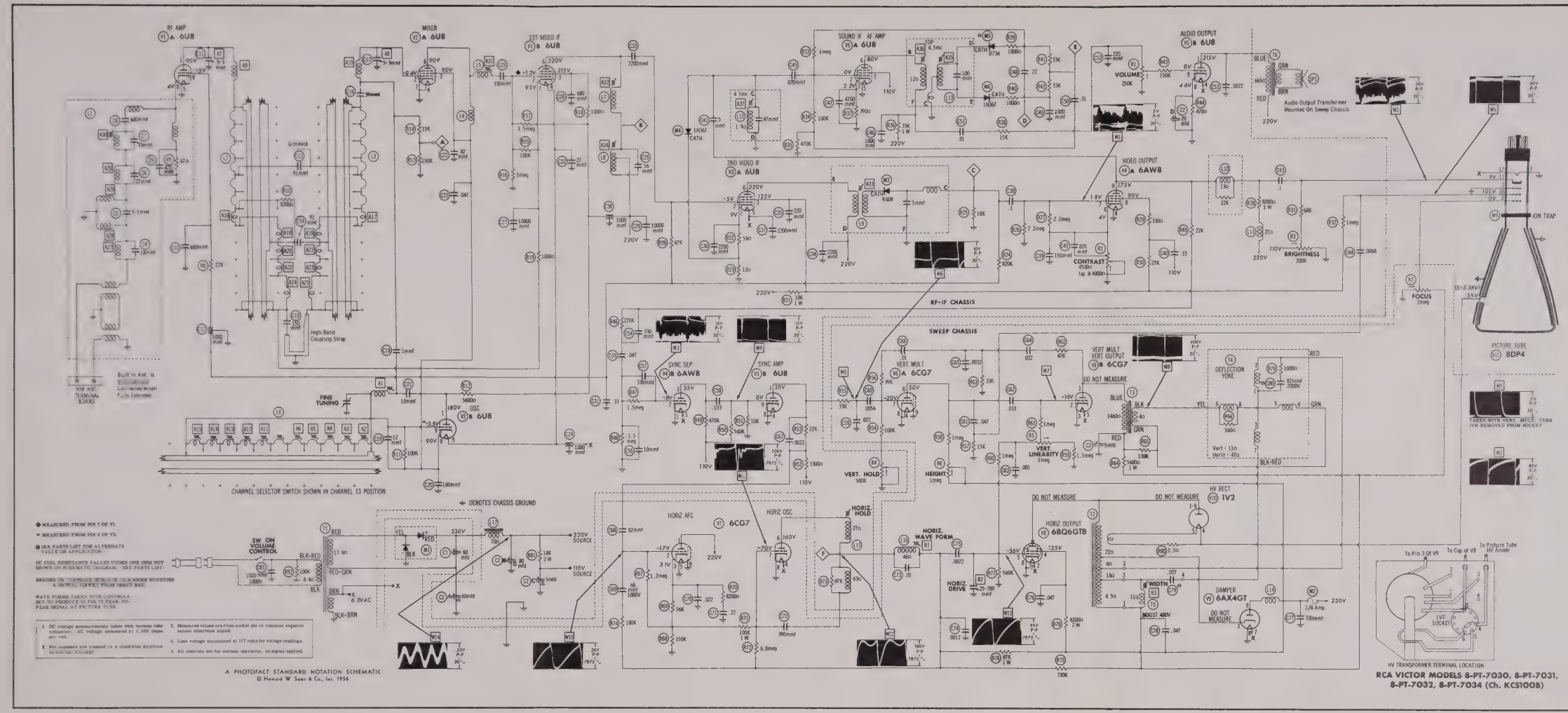
G602

DATE 11-56 SET 336 FOLDER 14



◆ MEASURED FROM PIN 7 OF V1.

● MEASURED FROM PIN 8 OF V2.

⊕ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION.

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM. SEE PARTS LIST.

WAVE FORMS TAKEN WITH CONTROLS SET TO PRODUCE 90 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE

1. DC voltage measurements taken with vacuum tube voltmeter. AC voltage measured at 1,000 ohms per volt.
2. Pin numbers are counted in a clockwise direction looking at socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation, no signal applied.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

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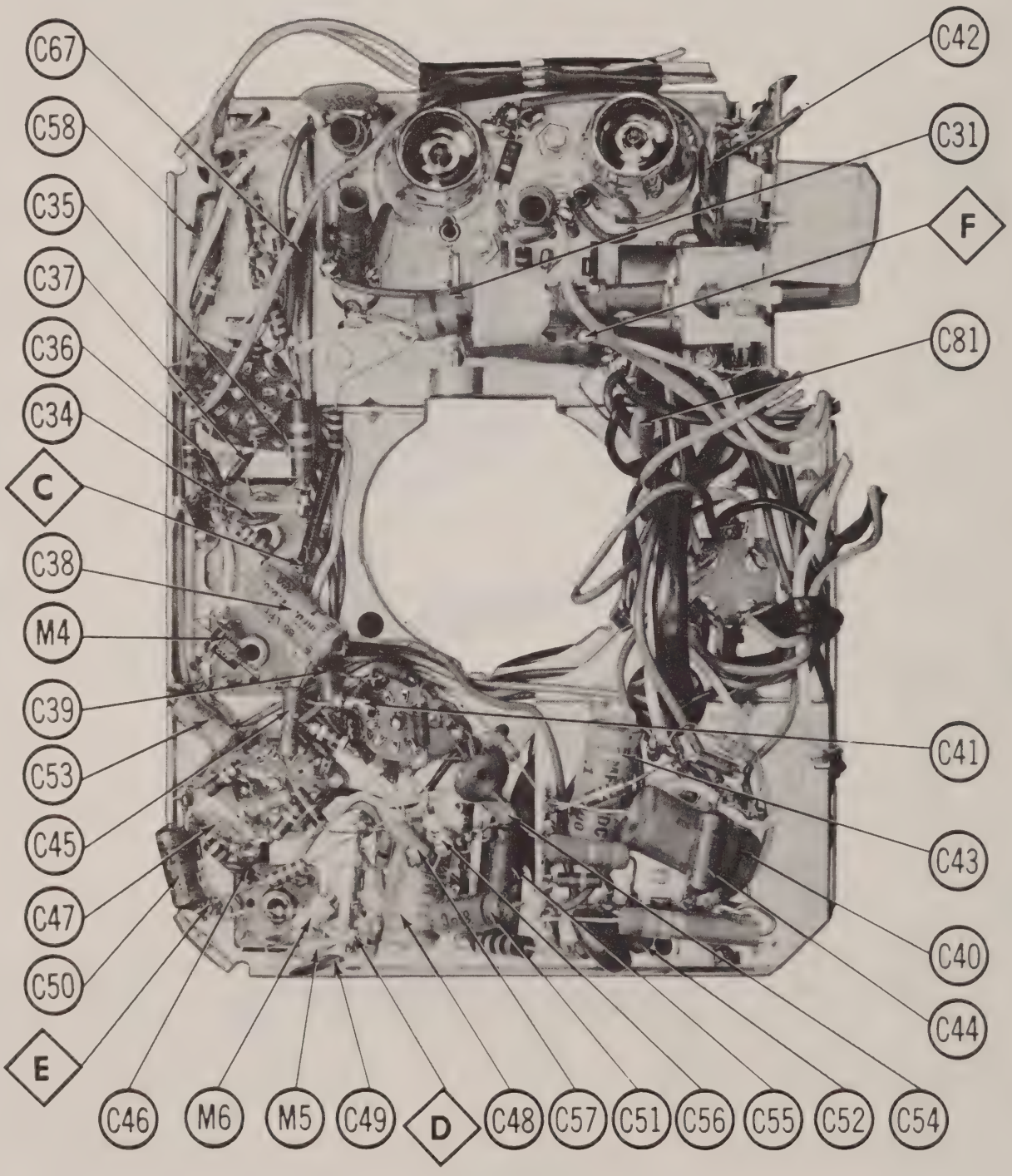
RF-IF CHASSIS-TOP VIEW

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031,
8-PT-7032, 8-PT-7034 (Ch. KCS100B)



RF-IF CHASSIS-CAPACITOR AND ALIGNMENT IDENTIFICATION

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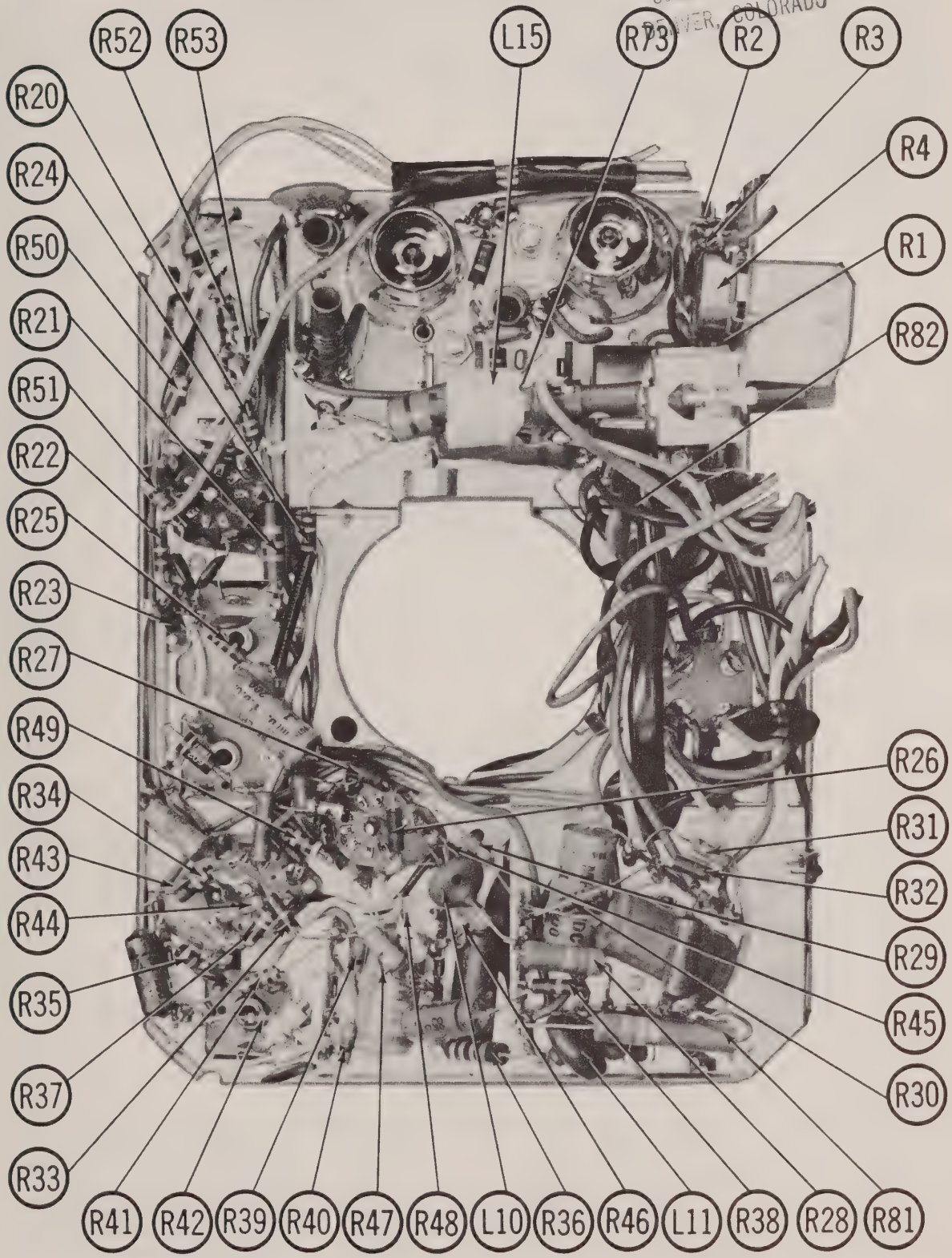

RF-IF CHASSIS-RESISTOR AND INDUCTOR IDENTIFICATION

SET 336 FOLDER 14

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

The high voltage lead should be securely taped and kept away from the chassis. Do not remove the horizontal oscillator tube (V7) from its socket to disable the high voltage.

TUNER ALIGNMENT

Connect a 180 ohm resistor from pin 3 (screen) to pin 6 (plate) of the converter tube (V2). Connect another 180 ohm resistor from pin 6 (plate) of the RF amplifier (V1) to point (B). Connect a short jumper wire from the tuner AGC line to the tuner case.
Tuner alignment as outlined below requires the use of a heterodyne frequency meter. The limits of oscillator injection voltages are 1.5 volts minimum and 3.5 volts maximum measured at point (A) with a VTVM.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Direct	RF input of heterodyne frequency meter to end of insulated wire. Insert other end of wire in top of oscillator tube shield.	Not Used.	257MC 251MC 245MC 239MC 233MC 227MC	13 12 11 10 9 8	Not Used.	A1 A2 A3 A4 A5 A6	Turn fine tuning control to a point approximately 84° from maximum counter clockwise rotation. Adjust A1 for an audible beat on the frequency meter.
2.	Fig. 1	Across antenna input terminals thru attenuator pad. (Fig. 1)	183MC (10MC Swp)	181.25MC 185.75MC	8	Vert. amp. to point (A). Low side to chassis.	A7, C15, A8	Adjust for approximate correct curve similar to Fig. 2. A7 affect the frequency of the bandpass most noticeably. A8 affects the tilt of the curve most noticeably. C15 has the most noticeable affect on the bandwidth and is adjusted by repositioning it. The valley between the peaks should fall no lower than 30% of peaks. Adjustments should favor maximum gain between peaks. The tilt between carrier markers on all channels except 2, 3 and 4 should not exceed 30% and for channels 2, 3 and 4 the tilt should not exceed 40%. All channels except 9 and 10 should have a maximum bandwidth of 6.75MC. Maximum bandwidth for 9 and 10 should not exceed 7.9MC.
3.	"	"	213MC (10 MC Swp)	211.25MC 215.75MC	13	"	A9, A10	Adjust for response similar to Fig. 2. Adjustment of A9 and A10 is made by expanding or compressing coil turns.

Turn off the sweep generator and marker if a separate marker is being used. Connect the DC probe of the VTVM to point (A). Connect the positive lead to chassis. Check the oscillator injection voltage to see if it falls within the limits as specified previously. If it is not within these limits, replace the 6U8 oscillator-mixer tube. If the voltage is still outside the limits, replace the oscillator coupling capacitor C18. This is all providing the B+ applied to the tuner is between 190 and 240 volts with no signal applied to the set.
If it was necessary to replace either of these components, repeat steps 1 and 2.

4.	Direct	Connect frequency meter as in step 1.	Not Used.	129MC 123MC 113MC 107MC 101MC	6 5 4 3 2	Not Used.	A11 A12 A13 A14 A15	Adjust for an audible beat on the frequency meter.
5.	Fig. 1	Across antenna input terminals thru attenuator pad. (Fig. 1)	129MC (10MC Swp)	127.25MC 231.75MC	6	Vert. amp. to point (A). Low side to chassis.	A16, A17	Adjust for curve similar to Fig. 2. Adjustment is accomplished by expanding and compressing coil turns.
6.	"	"	123MC (10MC Swp)	121.25MC 125.75MC	5	"	A18, A19	"
7.	"	"	113MC (10MC Swp)	111.25MC 115.75MC	4	"	A20, A21	"
8.	"	"	107MC (10MC Swp)	105.25MC 109.75MC	3	"	A22, A23	"
9.	"	"	101MC (10MC Swp)	99.25MC 103.75MC	2	"	A24, A25	"

Recheck the response of channels 7 through 13 and readjust A7, A8 and C15 if necessary to obtain the desired response. Repeat steps 1 and 4.

ANTENNA MATCHING UNIT ALIGNMENT

The antenna matching unit has been properly aligned at the factory. The RF unit is aligned with a particular antenna matching unit in place.
If a new antenna unit is installed, the RF unit should be realigned. Alignment should not be attempted without the proper alignment facilities.
The FM trap adjustment which is located on top of the antenna matching unit may be adjusted without seriously affecting the RF alignment.
Disconnect the cathode coil of the RF amplifier (V1A) at its point of connection with C8 leaving C8 connected to the eyelet in the junction board.
Solder a piece of insulated wire about 1 inch long to the eyelet through the hole in the rear of the tuner case.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The sweep generator output lead should be terminated with its characteristic impedance, usually 50 ohms.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
10.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	Not Used.	47.0MC (400∿ Mod)	Any	Vert. amp. thru detector probe (Fig. 3) to insulated wire (just installed). Low side to chassis.	A26	Adjust for MINIMUM 400∿ indication. Adjustment is made by expanding or compressing coil turns.
11.	"	"	"	41.25MC (400∿ Mod)	"	"	A27	"
12.	Fig. 1	"	50MC (20MC Swp)	50MC 52MC 53MC 60MC	"	"	A28, A29	Connect a 300Ω carbon resistor in parallel with an 8MMF ceramic capacitor from C8 to tuner chassis keeping the leads as short as possible. Adjust A28 and A29 to obtain a response curve similar to Fig. 4. Repeat steps 10, 11 and 12 until no further improvement is noted. Disconnect the 300Ω resistor and the 8MMF capacitor. Also the piece of insulated wire. Reconnect the RF amplifier cathode coil to C8.

ALIGNMENT INSTRUCTIONS (cont)

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FM TRAP ALIGNMENT

Tune in a local TV station in which interference is noticed. Adjust A30 for Minimum interference in the picture.

VIDEO IF ALIGNMENT

Ground tuner AGC as under "Tuner Alignment". Set the fine tuning at 84° from full counter clockwise rotation.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
13.	Two 120Ω carbon resistors	Across antenna terminals with 120Ω in each lead.	45MC (10MC Swp)	45.5MC	4	Vert. amp thru 10K to point Ⓒ. Low side to chassis.	A31, A32, A33	Adjust for maximum response similar to Fig. 5 with 45.5MC marker located as shown.
14.	"	"	"	41.25MC	"	"	A34	Adjust for maximum gain at 41.25MC marker as shown in Fig. 5.
15.	"	"	"	41.25MC 45.5MC	"	"		Adjust the sweep generator output to produce 1 volt peak to peak on the scope. While observing the curve on the scope, detune A32 clockwise to reduce the amplitude of the response curve by 5%. Then detune A33 counter clockwise (from the top) to decrease the amplitude 15% more from its original amplitude.
16.	"	"	69MC (10MC Swp)	67.25MC	"	"		Adjust the fine tuning to place the 67.25MC marker at 50%. Check the bandwidth of the overall response to make sure that it is at least 1.1MC.

Remove the jumper grounding the AGC line and connect the negative lead of a 3 volt bias supply to the AGC terminal. Connect the positive lead to chassis. Check the response curve on the scope and if necessary, readjust A31 SLIGHTLY to obtain the response shown in Fig. 6. The curve should be symmetrical and show a linear response on the picture carrier side of the curve. Adjust the fine tuning control to keep the 67.25MC marker at the 50% point on the curve when adjusting A31. The bandwidth should be 2.1MC with the fine tuning adjusted to keep the marker at 50%. If necessary, retouch A33 to obtain the proper bandwidth while keeping the marker at 50%.

SOUND IF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	CHANNEL	CONNECT VTVM	ADJUST	REMARKS
17.	.01MFD	High side thru .01MFD to point Ⓒ. Low side to chassis.	4.5MC (unmod)	Any	DC probe to point Ⓓ. Common to chassis.	A35, A36, A37	Adjust for maximum deflection. The signal from the signal generator should be at such a level as to produce 2 volts on the VTVM when these adjustments are peaked.
18.	"	"	"	"	DC probe to point Ⓔ. Common to chassis.		Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

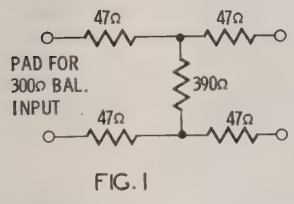


FIG. 1

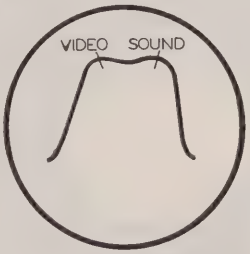


FIG. 2

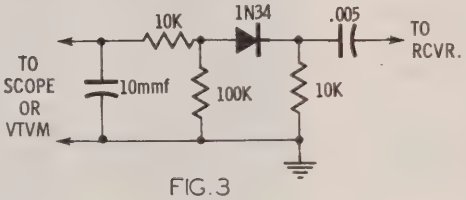


FIG. 3

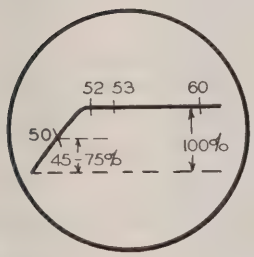


FIG. 4

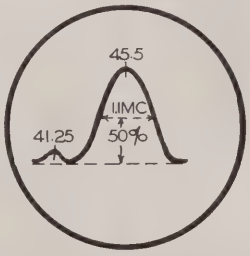


FIG. 5

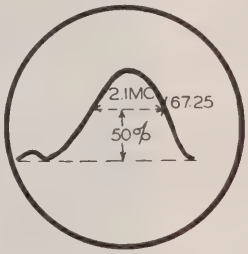
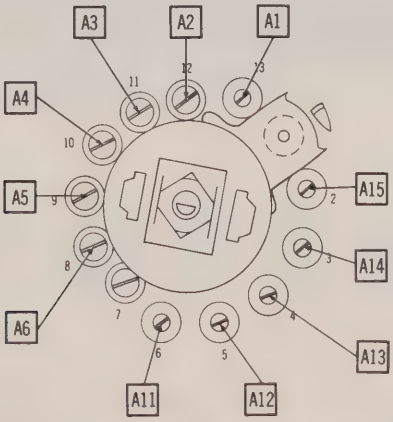
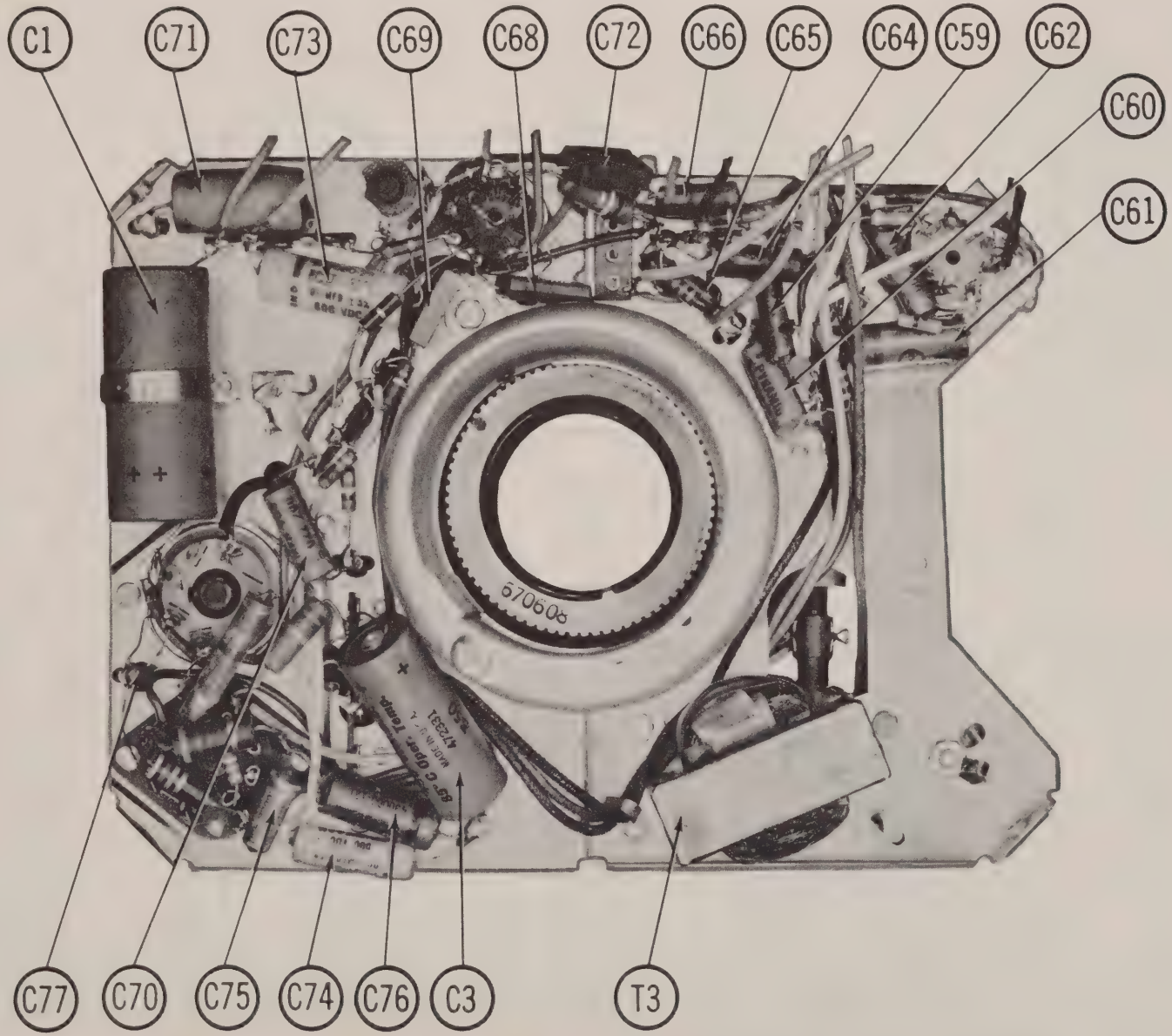


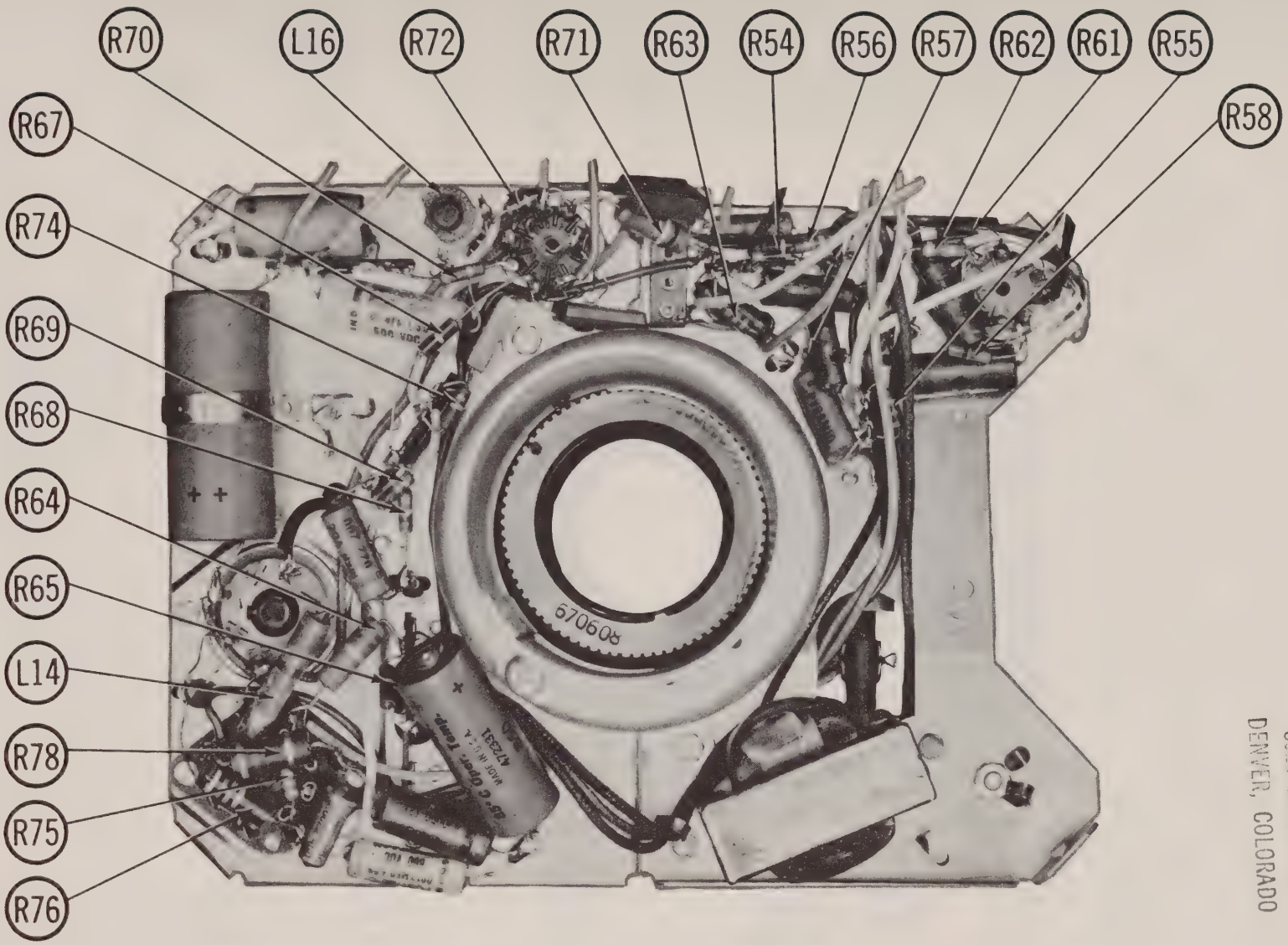
FIG. 6



RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)



SWEEP CHASSIS BOTTOM VIEW CAPACITOR IDENTIFICATION



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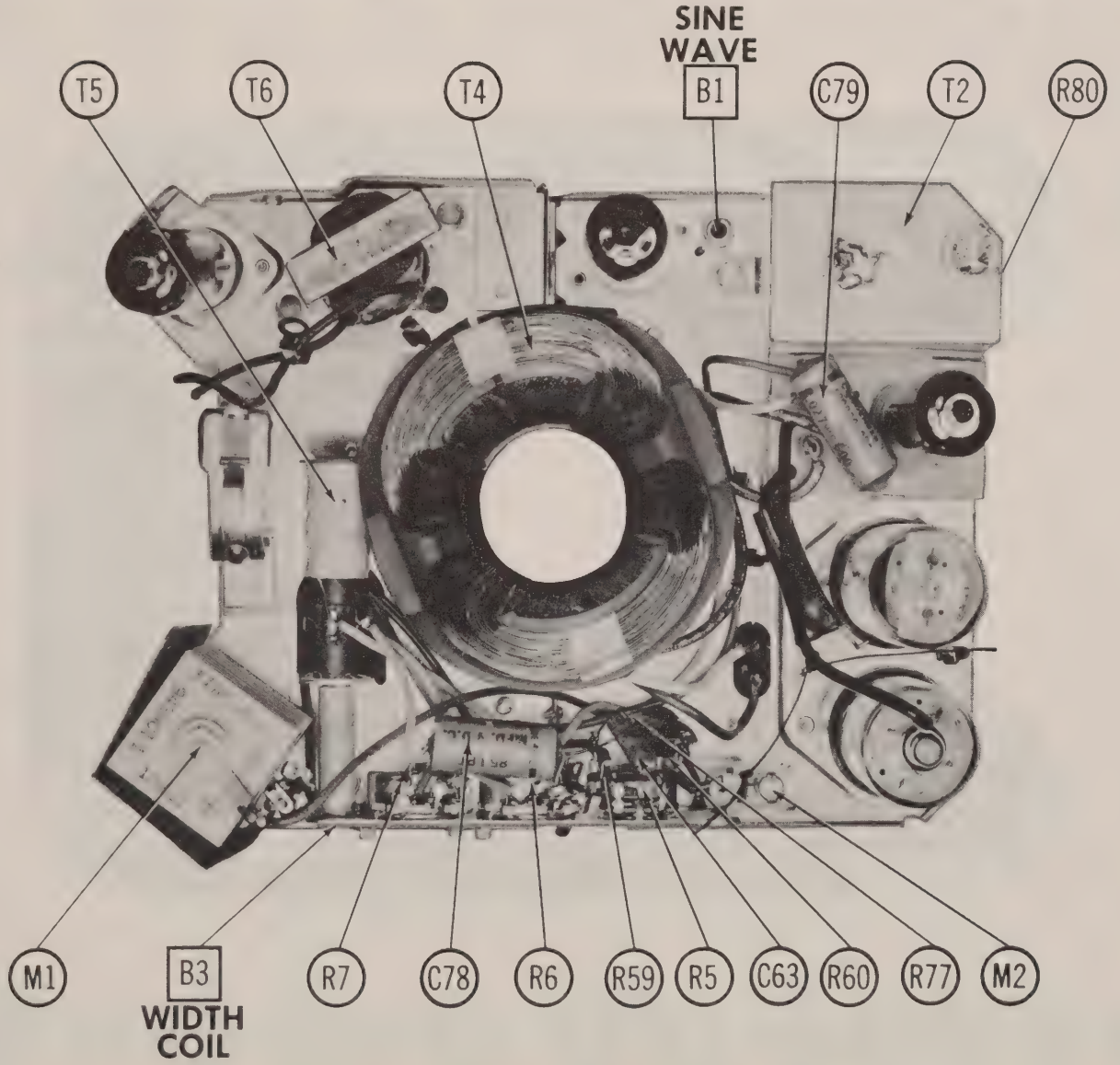
SWEEP CHASSIS BOTTOM VIEW RESISTOR AND INDUCTOR IDENTIFICATION

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)



SWEEP CHASSIS-TOP VIEW

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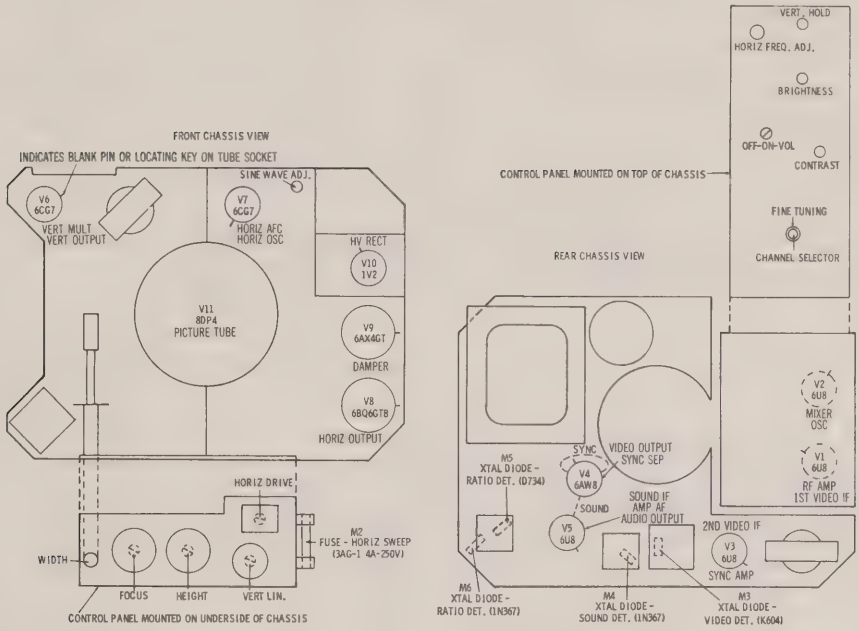
TUBE PLACEMENT CHART



TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce the indicated symptoms. Refer to tube placement chart for location and type of tube.

POWER SUPPLY FAILURE
No raster, no sound - **Selenium Rectifier (M1)**

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster - **V1, V2, V3, V4**
No pic, no sound, has snow - **V1, V2**
No pic, has sound, has raster - **V4, V11**
Has pic, no sound - **V5**

SYNC FAILURE
No vert. sync - **V3, V6**
No horiz. sync - **V3, V7**
No vert. or horiz. sync - **V3, V4**

SWEEP FAILURE
No raster, has sound - **V7, V8, V9, V10, V11, Fuse (M2)**
No vertical deflection - **V6**
Poor vert. linearity or foldover - **V6**
Poor horiz. linearity or foldover - **V7, V8, V9**
Narrow picture - **V7, V8, V9, V10, M1**
Vert. off freq. - **V3, V6**
Horiz. off freq. - **V3, V7**

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amp-1st Video IF Amp.	6U8	
V3	Mixer-Osc.	6U8	
V3	2nd Video IF Amp.		
	Sync Amp.	6U8	
V4	Video Output-Sync Sep.	6AW8	
V5	Sound IF Amp.- AF Amp.-		
	Audio Output	6U8	

ITEM No.	USE	TYPE	NOTES
V6	Vert. Mult.-Vert. Output	6CG7	
V7	Horiz. AFC-Horiz. Osc.	6CG7	
V8	Horiz. Output	6BQ6GTB	
V9	Damper	6AX4GT	
V10	HV Rectifier	1V3	

PICTURE TUBE

ITEM No.	REPLACEMENT DATA				NOTES
	RCA Victor PART No.	CBS PART No.	GENERAL ELECTRIC PART No.	SYLVANIA PART No.	
V11	6DP4		6DP4		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	RCA Victor PART No.	ARROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	FYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	80	150	102933	PRS150V80	BRS8015	TCD47	TDLD-4	FMD-1530	TVA-3434
C1A	40	150	102953	APH4-07-30					RS150*
B	40	300							
C	40	300							
D	20	25							
C3	5	450	28417	PRS450Y4	BR848	TC70	TD-5-450	FM-4508	TVA-1704

*Non-catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA								NOTES
	CAP.	VOLT	RCA Victor PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.		
C4	18		103576		TCZ-18	Z018	MPCK-180				
C5	5.1		103575	MPG-D51		Z051	MPGA-050	ET-505			
C6	37		103574		TCZ-37	Z037	MPCL-370				
C7	33		103573	MPG-D331	TCZ-33	Z033	MPGL-330	ET-5033	5TCC-Q33		
C8	680		77984	BPD-00068	BD-681	ED68	811-681	UC-5368	5GA-T68		
C9	470		77983	BPD-00047	BD-471	ED46	811-471	UC-5347	5GA-T47		
C10	680		77984	BPD-00068	BD-681	ED68	811-681	UC-5368	5GA-T68		
C11	5-3		103584		538-3		315-01-GR5	CT565A			
C12	1000		103583								
C13	.01		103577								
C14	.01		103577								
C15	150		103586	DI-00015	DD-151	G040	811-151	UC-5315	5GA-T15		
C16	39		103587								
C17	5-3		103584		538-3		315-01-GR5	CT565A			
C18	1		77980	MPG-E1	TCE-1	T203	MPGA-010		5TCCB-V1		
C19	13		7710		TCZ-13	Z013	MPCK-130				
C20	180		103565	MPG-E180	BD-181	T336	811-181				
C21	10		77985	MPG-D100	TCE-10	Z010	MPGA-106	ET-541	5TCC-Q1		
C22	15		78603								
C23	.047	400	77423	BPD-05	DF-503	CUB4847		PT4147	47M-S47		
C24	1000		103565								
C25	330		103089	BPD-00033	DD-331	G056	811-331	UC-5333	5GA-T33		
C26	680		77984	BPD-00068	DD-681	ED68	811-681	UC-5368	5GA-T68		
C27	0000		73960	BPD-01	DD-103	G052	811-01	DC511	5HK-S1		
C28	56		103559	MPG-S156	TCZ-56	Z056	MPG-337-560				
C29	10000		73960	BPD-01	DD-103	K062	811-01	DC511	5HK-S1		
C30	1000		103563								
C31	33	300	103575	PS88H-33							
C32	37		103580		D6-370	1037	831-370				
C33	3300		103074	DI-0033	D6-323	VD33	GP2-331-333	UC-5333	5GA-D33		
C34	3300		77983	BPD-00033	D6-323	K073	811-0033	UC-5333	5HK-D33		
C35	220		77981	DI-00022	DD-331	G051	811-331	UC-5333	5GA-T33		
C36	3300		77983	BPD-0033	D6-332	K073	811-0033	UC-5333	5HK-D33		
C37	3300		77983	BPD-00033	D6-332	K073	811-0033	UC-5333	5HK-D33		
C38	.1	200	78281	PS88H-1	D6-104	CUB4P1		PT401	47M-P1		
C39	150		78278	SS150	D6-151	T236	GP3K-151	UC-5315	5GA-T15		
C40	.33	300	103078	PS88H-33							
C41	5		103073	MPG-S5	TCZ-4R7	Z011	MPGA-060	ET-555	5TCCB-V47		
C42	330		103084	SS330	D6-331	G067	811-331		5GA-T33		
C43	1	400	77423	PS88P-1	DF-104	CUB4P1		PT401	47M-P1		
C44	.0068	200	103078	BPD-0068	D6-683	CUB6D68	GP3-333-683	PT6268	67M-D68		
C45	330		103256	1464-00032		1R2T32	811-331		5HS-T32		
C46	1000			BPD-001	DD-103	K066	811-001	DC521	5HK-D1		
C47	4700			BPD-0047	DD-472	K079	811-0047	UC-5347	5HK-D47		
C48	.33	300	79760	PS88H-33		CUB33P22		PT4133	67M-P33		
C49	1000			BPD-001	DD-103	KD69	811-001	DC521	5HK-D1		
C50	.01	500	77434	BPD-01	D6-103	CUB4B1	GP3-333-103	PT411	47M-S1		
C51	.01	400	103344	BPD-01	D4-103	CUB4B1	GP3-333-103	PT411	47M-S1		
C52	330		77981	DI-00033	DD-331	G051	811-331	UC-5333	5GA-T33		
C53	.0033	600	103073	BPD-0033	D6-332	CUB6D33	GP3-333-333	PT6333	67M-D33		
C54	330		78663	SS330	D6-331	TP43	GP3K-331	UC-5333	5GA-T33		
C55	.047	400	77433	BPD-05	DF-503	CUB4847		PT4147	47M-S47		
C56	10		33098	M150-S10	TCN-10	T809	M150A-100	MT-541	5TCU-Q1		
C57	330		78663	SS330	D6-331	TP43	GP3K-331	UC-5333	5GA-T33		
C58	.033	300	103077	BPD-03	DF-303	CUB6833		PT4133	67M-S33		
C59	.033	300		BPD-03	DF-303	CUB4833	K17-03	PT4133	47M-S33		
C60	.0056	500	103085	1464-0056		1R5D56		MS-356			
C61	.047	400	78281-A								
C62	.033	300	103077	PS88H-033		CUB6833		PT4133	67M-S33		
C63	.001	300	77533	BPD-001	D6-103	CUB6D1	GP3L-103	PT631	67M-D1		
C64	.033	300	103080								
C65	.0033	600	103079								
C66	.01	300	101200	1464-01		1DR-S21		MCB475	MS-11		
C67	.0033	600	77943	DI-0033	D6-322	1RSD33	GP3-333-333	UC-5333	5GA-D33		
C68	68	500	78474	1464-00068	D6-680	33R68S	831-680		MS-468		
C69	68		78475								
C70	.022	400		BPD-02	DF-303	CUB4822	K17-03	PT4122	47M-S22		
C71	.33	300	79760	PS88H-33		CUB33P33		PT4133	67M-P33		
C72	180	500				5R473S			MS-359		
C73	.01	600	73564								
C74	.0013	600	78895	1464-0013		1RSD13			MS-313		
C75	.0033	600	103079	1464-0033		1RSD33			67M-S47		
C76	.047	400	77433	BPD-05	DF-503	CUB4847		PT4147	47M-S47		
C77	330		103089	BPD-00033	DD-331	G056	811-331	UC-5333	5GA-T33		
C78	.047	600	103088	BPD-05	DF-503	CUB6847		PT6167	67M-S47		
C79	.027	600									
C80	33	3000			DD30-330				30GA-Q33		Note 1
C81	1000	1000	103524	HYD-15-100	DD-103	VD1	1R5KV-103	DC3021	10GA-D1		Note 2

Note 1: Some versions may use .033MFD in this application. (part #103569)
Note 2: Some versions may use 68MMF in this application.

PARTS LIST AND DESCRIPTIONS

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST ANCE	WATTS	RCA Victor PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No	
R1A	250K		102055	B-51-S	A47-250K-2			Volume & Switch
B	Shaft			Not Req.	RS-3/16			Attach to R1A
C	Switch			Not Req.	SWE-13			Attach to R1A
D	Cover			KB-8				Attach to R1A
R2	4500Ω		103056					Contrast - tapped @ 4000Ω
R3	200K		103054					Brightness
R4	800K		102057					Vert. Hold
R5	1Meg		102059					Vert. Linearity
R6	1Meg		102060			BU-137-TM-1	TA1EL	Height
						KH		
R7	2Meg		102061			BU-139-TM-1	PTA2EL	Focus
						KH		

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	RCA Victor PART No.	IRC PART No.	
R8	22K		502322	BTS-22K	
R9	47Ω		502047	BTS-47	
R10	8200Ω		502382	BTS-8200	
R11	100K		502410	BTS-100K	
R12	56000Ω		502356	BTS-5600	
R13	150K		502415	BTS-150K	
R14	15K		502315	BTS-15K	
R15	100K		502410		
R16	1Meg		502510	BTS-1.0Meg	
R17	1.5Meg		502515	BTS-1.5Meg	
R18	10000Ω	1	502310	BTS-1000	
R19	10000Ω		502320	BTS-1000	
R20	47K		502347		
R21	18K	1	502318	BTA-18K	
R22	960		502096	BTA-96	
R23	12Ω		502012	BTS-12	
R24	830K		502493	BTS-830K	
R25	18Ω		502018	BTS-18K	
R26	2.5Meg		502525	BTS-2.5Meg	
R27	2.5Meg		502532	BTS-2.5Meg	
R28	5200Ω	1	502352	BTA-5200	
R29	330Ω		502132	BTS-330	
R30	37K		502337	BTS-37K	
R31	68K		502368	BTS-68K	
R32	1Meg		502510	BTS-1Meg	
R33	1Meg		502510	BTS-1Meg	
R34	100K		502410	BTS-100K	
R35	470K		502447	BTS-470K	
R36	33K	1	502333	BTA-33K	
R37	330Ω		502139	BTS-330	
R38	18K		502318	BTS-18K	
R39	1000Ω		502310	BTS-1000	
R40	100Ω		502310	BTS-1000	
R41	33K 5%		502333	BTS-33K 5%	
R42	33K 5%		502333	BTS-33K 5%	
R43	150K		502415	BTS-150K	
R44	470Ω		502147	BTS-470	
R45	33K		502333	BTS-33K	

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	RCA Victor PART No.	IRC PART No.	
R46	270K		502437	BTS-270K	
R47	1.5Meg		502515	BTS-1.5Meg	
R48	1.5Meg		502515	BTS-1.5Meg	
R49	470K		502447	BTS-470K	
R50	560K		502456	BTS-560K	
R51	10K		502310	BTS-10K	
R52	3300Ω		502333	BTS-3300	
R53	33K		502333	BTS-33K	
R54	100K		502410	BTS-100K	
R55	33K		502333	BTS-33K	
R56	39K		502339	BTS-39K	
R57	15K		502315	BTS-15K	
R58	1Meg		502510	BTS-1Meg	
R59	1.5Meg		502515	BTS-1.5Meg	
R60	1Meg		502510	BTS-1Meg	
R61	1Meg		502510	BTS-1Meg	
R62	47K		502347	BTS-47K	
R63	33K		502333	BTS-33K	
R64	5600Ω	1	512356	BTA-5600	
R65	100K		502410	BTS-100	
R66	560Ω				
R67	1.5Meg		502515		
R68	180K		502418	BT8-180K	
R69	56K		502356	BTS-56K	
R70	8200Ω		502382	BTS-8200	
R71	100K	1	512410	BTA-100K	
R72	6.8Meg		502668		
R73	47K		502347	BTS-47K	
R74	180K		502418	BTS-180K	
R75	330K		502433	BTS-330K	
R76	47K	1	512347		
R77	150K		502458		
R78	8200Ω	2	512382		
R79	1000Ω				
R80	1.5Ω			BW9-1.5	
R81	18K	2	512318	BT8-18K	
R82	100K		502410	BT8-100K	

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	RCA Victor PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No
T1	117VAC @ .8A	26V @ .14A	6.3V @ 6.4A		103047					

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA						
		RCA Victor PART No.	Halldorson PART No.	Merit PART No.	RCA TYPE No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T2	Horiz. Output Trans.	103045 ①							
T3	Vert. Output Trans.	103048 ②							
T4A	Yoke (90°) Horiz(34MC)	103053 ③							
B	Vert(1MC)	103083 ③							
T5	Width Coil (2.5-19MH)	103054			MWC-11		201R16	WC-12 ④	

① Includes resistor R40.
② Includes capacitor C39; Resistors R66 and R78.
③ Yoke rear cover and centering device.
④ Use red and blue terms.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	RCA Victor PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T6	6.6K	3-4Ω	103048		22117	A-3937	A-3939	24849	S-11X

SPEAKER

ITEM No.	RATINGS				REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C.	IMP.	RCA Victor PART No.	QUAM PART No.	RCA TYPE No.	
SP1	5½"	PM		3-4Ω	103104			

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	RCA Victor PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Matching Terminal Board			103048				Complete assy. Includes Coils and Capacitors. Stator Complete With Rotor and Coils.
L2	Ant. Coils	0Ω		103049				Stator Complete With Rotor and Coils.
L3	RF Coils	0Ω		103048				
L4	RF Choke	.4Ω		103586				
L5	RF Choke	0Ω		103566				
L6	Osc. Coils	0Ω		102547				
L7	1st Video IF	.1Ω		103567				
L8	Sound Boost Coil	0Ω		103569				Tapped. Includes M3, Cap., & Series Peaking Coil
L9	2nd Video IF	.4Ω		103051				
L10	Series Peaking Coil	13Ω		103087	19-3300*		5159*	300 Microhenries; Wound on 22K resistor.
L11	Shunt Peaking Coil	37Ω		77194	18-6050		4883	1000 Microhenries
L12	Sound IF	1.9Ω		103049				
L13	Ratio Det.	1.8Ω	1.0CT	103090				Tertiary winding = .3Ω
L14	RF Choke	.72Ω		103053	19-1001		4604	L 5 Microhenries; IRC part #CL-L.

* Parallel with 22K resistor.

TRANSFORMER (HORIZ. OSC.)

ITEM No.	DC RES.		REPLACEMENT DATA						NOTES
	PRI.	SEC.	RCA Victor PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	RCA TYPE No.	Ram PART No.	Thordarson PART No.
L15	90Ω		78161						
L16	66Ω		79986			6314			

Tapped @ 82Ω

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE @ CURRENT 1000 Cy.	RCA Victor PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No
L17	.145A	70Ω	1.2HY	103053					

SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	RCA Victor PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	
M1	.145A	103049	1481A	RS150 ①		10F3909	310D	① Two required.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			RCA Victor PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	3AG	1/4A	78204	78316	312.250 (3AG-1/4A)	357001	AGC 1/4	4405

CRYSTAL DIODES

ITEM No.	ORIG TYPE	REPLACEMENT DATA		
		RCA Victor PART No.	SYLVANIA PART No.	NOTES
M3	K604			Video Det (Pigtail)
M4	1N87	100644		Sound IF Limiter (Pigtail)
M5	D756*	100644		Ratio Det (Pigtail)
M6	1N387	100644		Ratio Det (Pigtail)

* Some versions may use crystal diode type 1N367 in this application.

MISCELLANEOUS

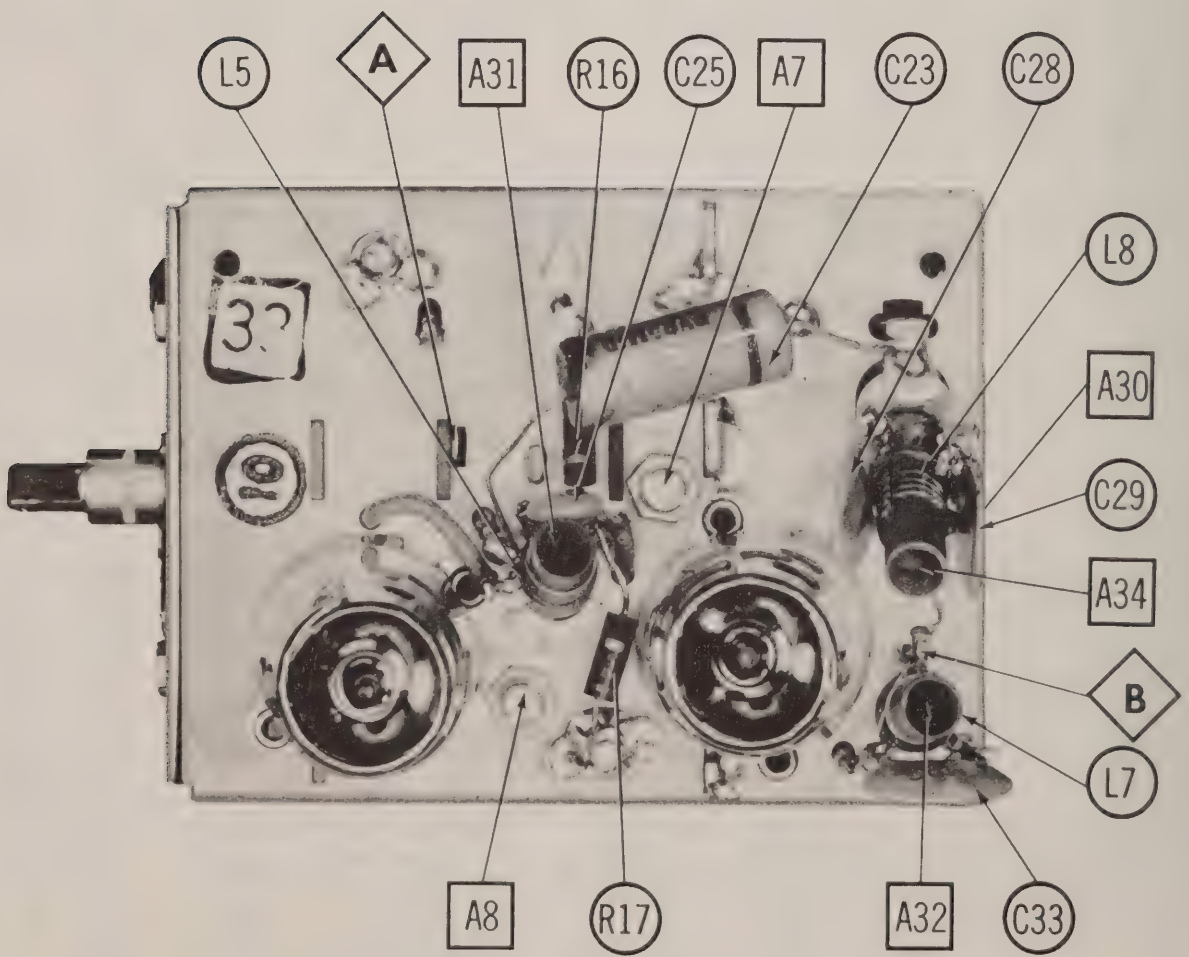
ITEM No.	PART NAME	RCA Victor PART No.	NOTES
M7	Tuner	KRK55A	VHF
M8	Centering Device	102063	Includes Deflection Yoke (T4) Rear Cover.
M9	Ion Trap	800000	
B2	Trimmer Cap.	102467	Horiz. Drive (25-280MMF)
	Handle	102095	Model 8PT7030
	Handle	102097	Model 8PT7031
	Handle	102096	Model 8PT7034
	Handle	102787	Model 8PT7032
	Knob	800000	Channel Selector
	Knob	800000	Fine Tuning
	Knob	800000	On-Off-Volume & Contrast
	Knob	102095	Vertical Hold & Brightness
	Safety Glass	102109	
	Mask	102107	

RCA VICTOR MODELS 8-PT-7030, 8-PT-7031, 8-PT-7032, 8-PT-7034 (Ch. KCS100B)

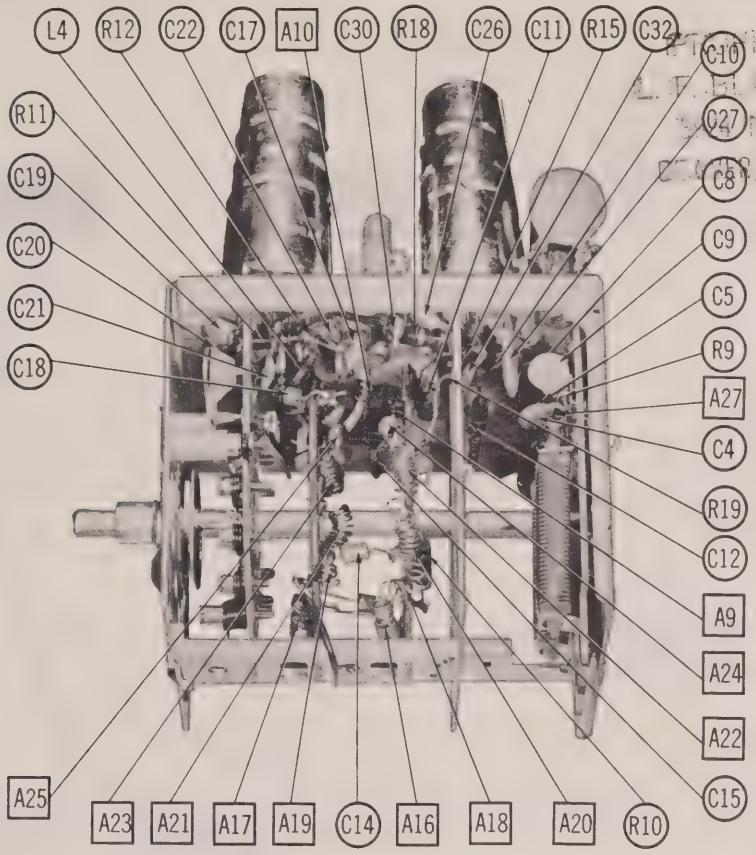
RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6U8	♦1000Ω	550K	†1000Ω	.1Ω	0Ω	†70Ω	650K	47Ω	800K
V2	6U8	†5600Ω	165K	INF	0Ω	.1Ω	INF	0Ω	INF	▬100K
V3	6U8	†40K	850K	†18K	0Ω	.1Ω	†70Ω	70Ω	0Ω	10K
V4	6AW8	0Ω	3Meg	†500K	.1Ω	0Ω	● 600Ω	1Meg	†45K	†8200Ω
V5	6U8	†740Ω	370K	†18K	.1Ω	0Ω	†33K	390Ω	470Ω	●370K
V6	6CG7	*7000Ω	1.8Meg	0Ω	0Ω	.1Ω	●†2Meg	●350K	0Ω	0Ω
V7	6CG7	†70Ω	1.2Meg	200K	.1Ω	0Ω	†47K	250K	0Ω	0Ω
V8	6BQ6GTB	TP	.1Ω	TP	†8200Ω	450K	TP	0Ω	0Ω	TOP CAP *22Ω
V9	6AX4GT	TP	NC	250K	NC	†70Ω	NC	.1Ω	0Ω	
V10	1V2	*22Ω	INF	INF	INF	INF	INF	INF	INF	*22Ω
V11	8DP4	0Ω	0Ω	●*300K	PIN 10 †1Meg	PIN 11 ●†100K	PIN 12 .1Ω			

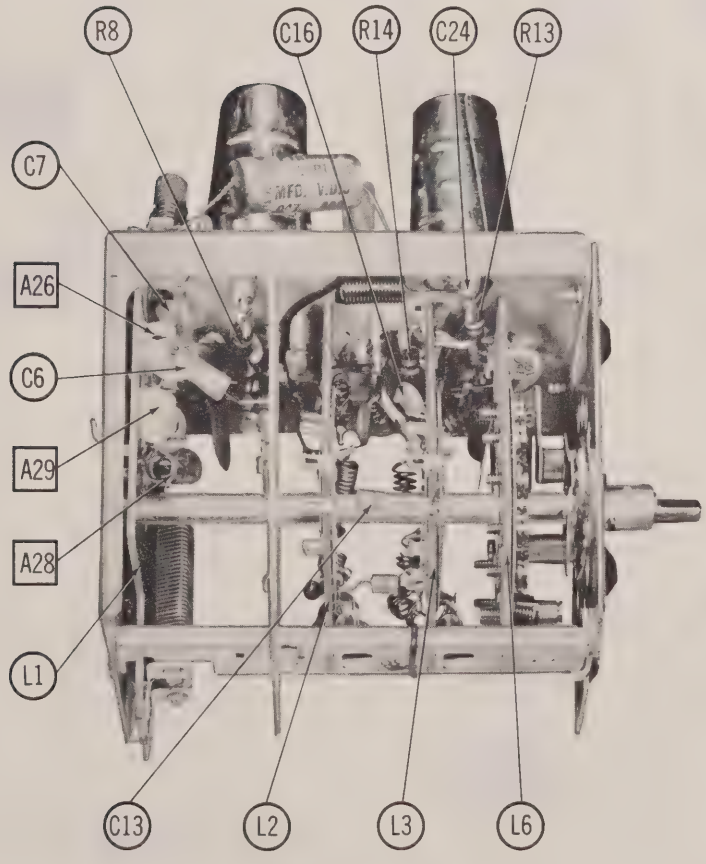
♦ MEASURED FROM PIN 7 OF V1.
▬ MEASURED FROM PIN 8 OF V2.
● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
* MEASURED FROM PIN 3 OF V9.
† MEASURED FROM OUTPUT OF M1.
TP TIE POINT
NC NO CONNECTION



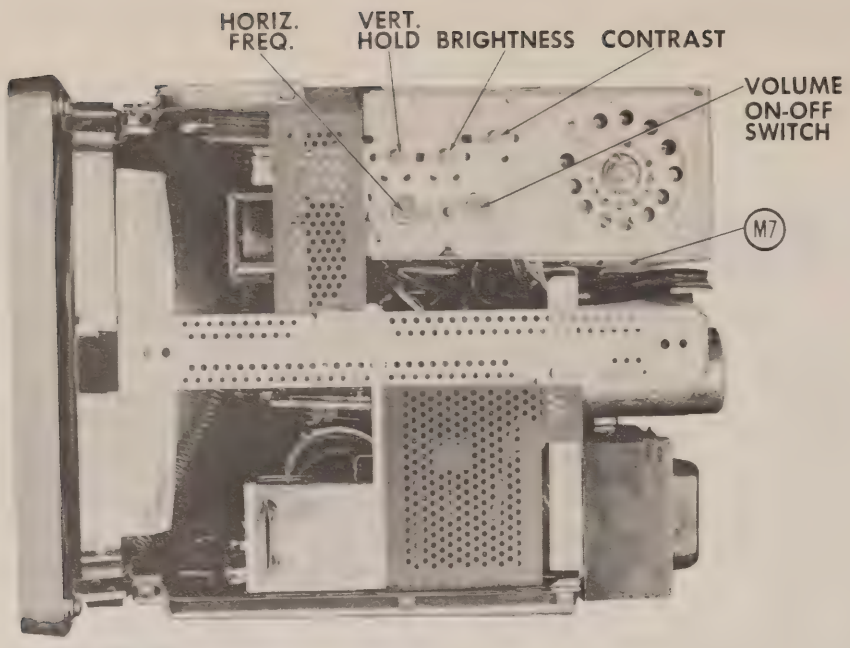
RF TUNER TOP VIEW



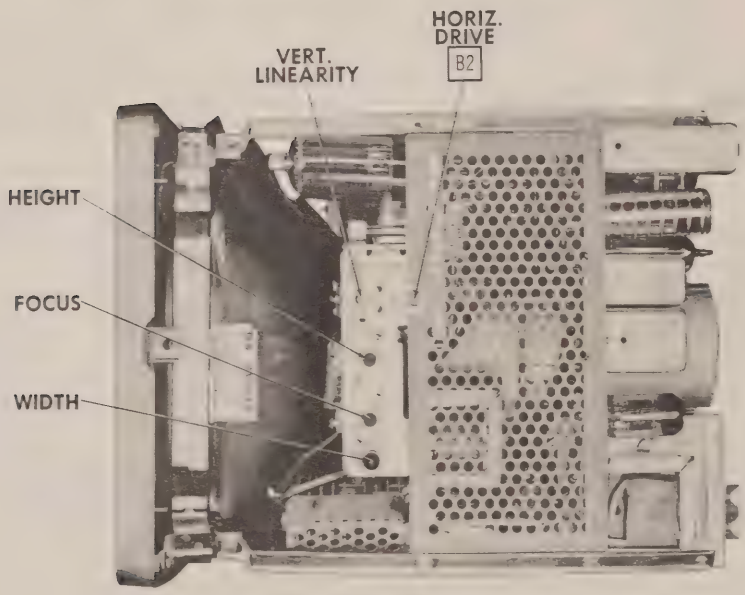
RF TUNER-RIGHT SIDE



RF TUNER-LEFT SIDE



CHASSIS ASSEMBLY TOP VIEW



CHASSIS ASSEMBLY BOTTOM VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and tune in a TV station, preferably with a test pattern.

Connect a jumper across the horizontal hold until the picture synchronizes horizontally. Remove the short from across L16 and connect the low capacity probe of the scope to point (F). Connect the low side to chassis. Turn the horizontal hold clockwise until the picture falls out of sync, then counter clockwise until the picture just pulls into sync. Adjust the horizontal waveform slug (B1) until the waveform on the scope appears similar to Fig. 7 with the round and sharp peaks of equal amplitude. Keep the picture in sync during this alignment with the horizontal hold.

Adjust the horizontal drive (B2) for maximum width without the presence of vertical white lines or compression near the center of the picture.

Adjust the horizontal width slug (B3) for a picture slightly wider than necessary to fill the picture mask horizontally.

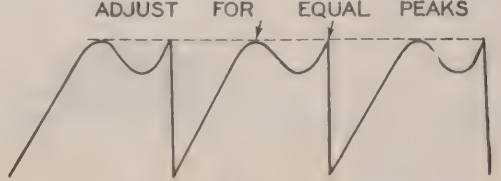


FIG. 7

RETMA MEMBER

WEBCOR MODEL 1658

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE ST.
DENVER, COLORADO

WEBCOR MODEL 1658

WEBCOR MODEL 1658

TRADE NAME	Webcor Model 1658
MANUFACTURER	Webster-Chicago, 5610 Bloomingdale Ave., Chicago 39, Ill.
TYPE SET	AC Operated Phono Amplifier With 3 Speed Automatic Record Changer
TUBES (Five)	Types 12AX7 AF Amplifier, 12AX7 AF Amplifier-Phase Inverter, (2) 6V6GT Output, 5Y3GT Rectifier
POWER SUPPLY	110-120 Volts AC - 60 Cycles RATING .53 Amp. @ 117 Volts AC

WEBCOR RECORD CHANGER MODEL VHF IMPERIAL

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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PARTS LIST AND DESCRIPTIONS

WEBCOR MODEL 1658

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	AF Amplifier	12AX7	
V2	AF Amp. -Phase Inv.	12AX7	
V3	Output	6V6GT	
V4	Output	6V6GT	
V5	Rectifier	5Y3GT	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA WEBCOR PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	35	375	30P249	PRS450V4040	B043	FP238			R2251†
B	35	375							
C2A	15	250	30P214	PRS250V2020	B064			MTD-305	R2252†
B	25	25							
C3	2	25	30P222 (Note 1)	PRS25VNP2	BBR4-50T * BBR4-50T	TC30 * TC30		MMT-0505 * MMT-0505	R2253†

Note 1: Non-polarized unit.
* Connect negative leads together.
† Non catalog item.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA WEBCOR PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C4	20000		30P246	BPD-02	DD-02	K085	817-02	PT412	5HK-S2	
C5	1500		30P252	BPD-0015	DD-152	K071	801-0015	DC-5215	5HK-D15	
C6	10000		30P209	BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	
C7	2000		30P251	BPD-002	DD-202	K072	801-002	DC-522	5HK-D2	
C8	.05	400	30P255	BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C9	47		30P248	N750-DI47	TCN-47	N033	N750K-470	NT-5447	5TCU-Q47	
C10	100		30P149	S1100	D6-101	TP34	GP1K-101	UC-531	5GA-T1	
C11	1000		30P240	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1	
C12	2200		30P137	BPD-0022	D6-222	K073	811-0022	UC-5222	5GA-D22	
C13	.05	400	30P255	BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C14	.05	400	30P255	BPD-05	DF-503	CUB4S5		PT415	4TM-S5	
C15	2200		30P137	BPD-0022	D6-222	K073	811-0022	UC-5222	5GA-D22	
C16	1500		30P252	BPD-0015	DD-152	K071	801-0015	DC-5215	5HK-D15	
C17	1000		30P240	BPD-001	DD-102	K069	801-001	DC-521	5HK-D1	
C18	10000	1400	30P220	BPD-01	DD-103	K082	811-01	DC-511	5HK-S1	

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA WEBCOR PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1	1Meg	½	31P104					Audio Level-Tapped@ 150K & 300K
R2	1Meg	½	31P082					Treble & Switch
R3	2Meg	½	31P083					Bass

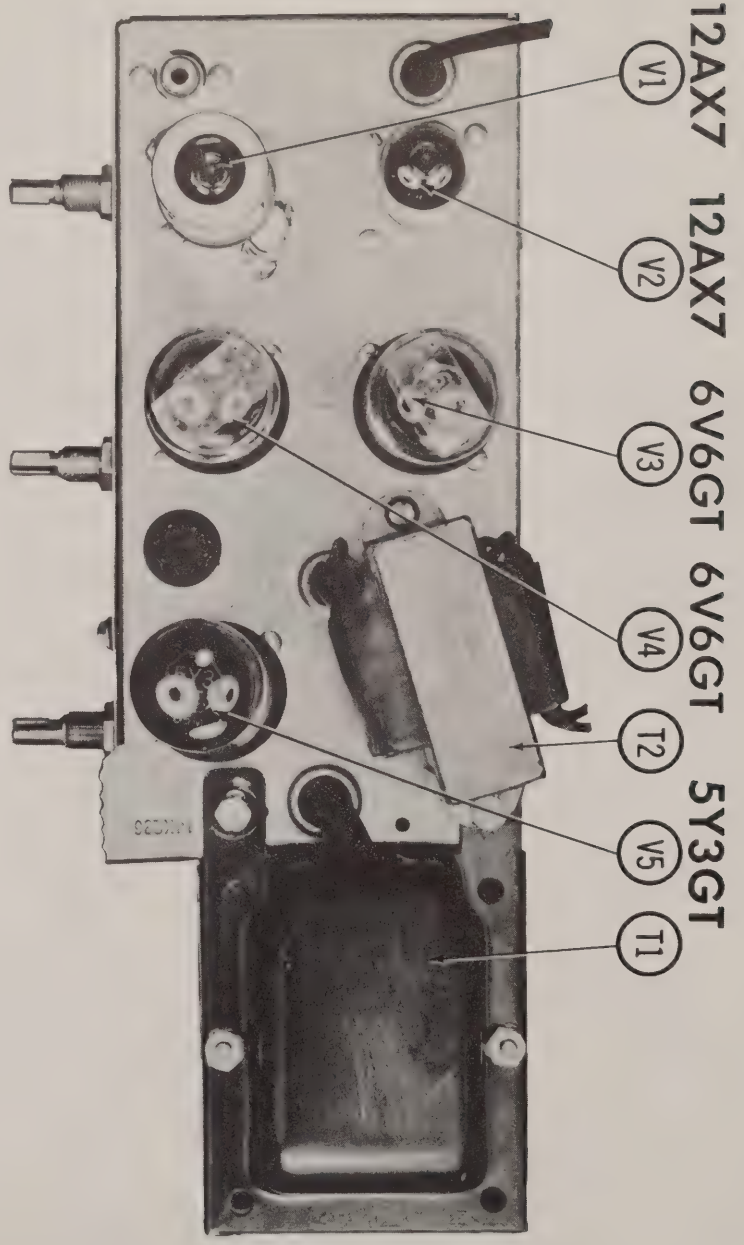
RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA WEBCOR PART No.	IRC PART No.	NOTES
R4	10K		29M1032	BTS-10K	
R5	4.7Meg		29S4752	BTS-4.7Meg	
R6	150K		29M1542	BTS-150K	
R7	24K 5%		29L2432	BTS-24K 5%	
R8	470Ω		29M4712	BTS-470	
R9	4.7Meg		29S4752	BTS-4.7Meg	
R10	68K		29M6832	BTS-68K	
R11	15Ω		29M1506	BW½-15	
R12	220K		29M2242	BTS-220K	
R13	100K		29M1042	BTS-100K	

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA WEBCOR PART No.	IRC PART No.	NOTES
R14	100K		29M1042	BTS-100K	
R15	560Ω		29M5612	BTS-560	
R16	100K		29M1042	BTS-100K	
R17	150K		29M1542	BTS-150K	
R18	3300Ω		29M3322	BTS-3300	
R19	150K		29M1542	BTS-150K	
R20	270Ω	2	29M2714	BTB-270	
R21	2200Ω	1	29M2223	BTA-2200	
R22	68K		29M6832	BTS-68K	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	WEBCOR PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC @ .53A	630VCT @ .076A	5VAC @ 2A	6.3VCT @ 1.58A	68P035-1	P9306 ①	P-3151 ①	PC-8408 ①		R-9A ①

① Bend ear down to fit or use original shell.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	WEBCOR PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	6.6K	6-8Ω	67P049-2						

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C. IMP.	WEBCOR PART No.	QUAM PART No.	RCA TYPE No.	
SP1	10"	PM	3-4Ω	76P042-2	10A31	236S1	
SP2	10"	PM	3-4Ω	76P042-1	10A10XZ3.3		
SP3	3½"	PM	6-8Ω	76P043-1	3A15T		

PHONO CARTRIDGE

ITEM No.	REPLACEMENT DATA					REMARKS
	WEBCOR PART No.	ASTATIC PART No.		ELECTRO-VOICE PART No.		
		CARTRIDGE	NEEDLE	CARTRIDGE	NEEDLE	
M1						

PHONO NEEDLE

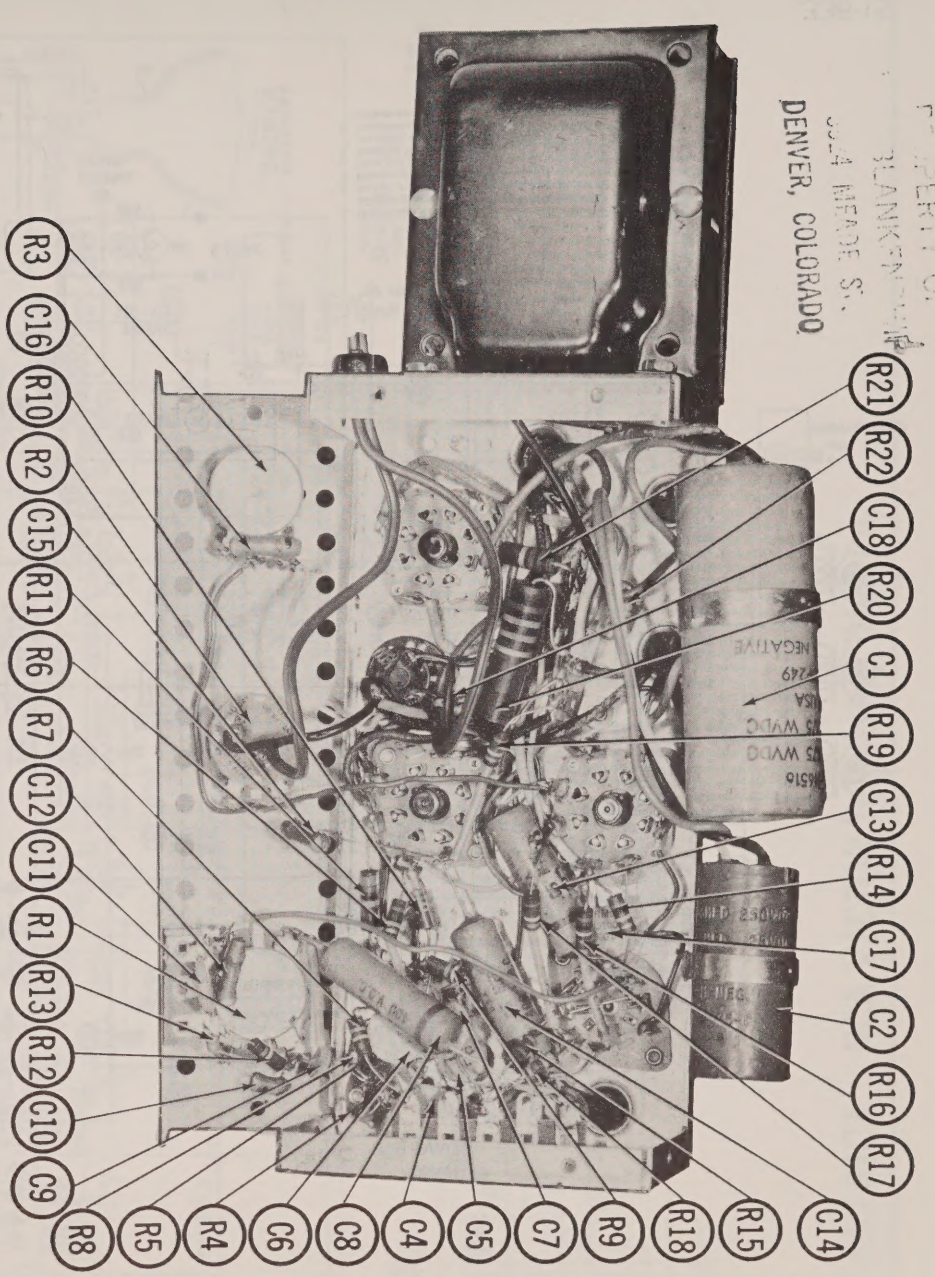
(FOR REPLACEMENT IN ORIGINAL EQUIPMENT CARTRIDGE)

ITEM No.	REPLACEMENT DATA				REMARKS
	WEBCOR PART No.	FIDELITONE PART No.	JENSEN PART No.	WALCO PART No.	
M2		†AC-111A or ♦†AC-111D1A or †♦AC-111D2A or ♦AC-111DA	†G-13 or ♦†G-13SD or ♦C-13D	†W-66TPS or ♦†W-66DS or ♦W-66TPD	† Jewel ♦ Diamond

MISCELLANEOUS

ITEM No.	PART NAME	WEBCOR PART No.	NOTES
M3	Dial Light		#47
M4	Switch	32P060	AM-FM Recorder, Fonograf (SPDT-Slide Type)
	Cabinet	80X154-1	Mahogany
	Cabinet	80X154-2	Blond
	Knob	39P142-7C	Audio Level, Bass, On-Off-Treble (Mahogany Cabinets)
	Knob	39P142-7T	Audio Level, Bass, On-Off-Treble (Blond Cabinets)

CHASSIS—BOTTOM VIEW



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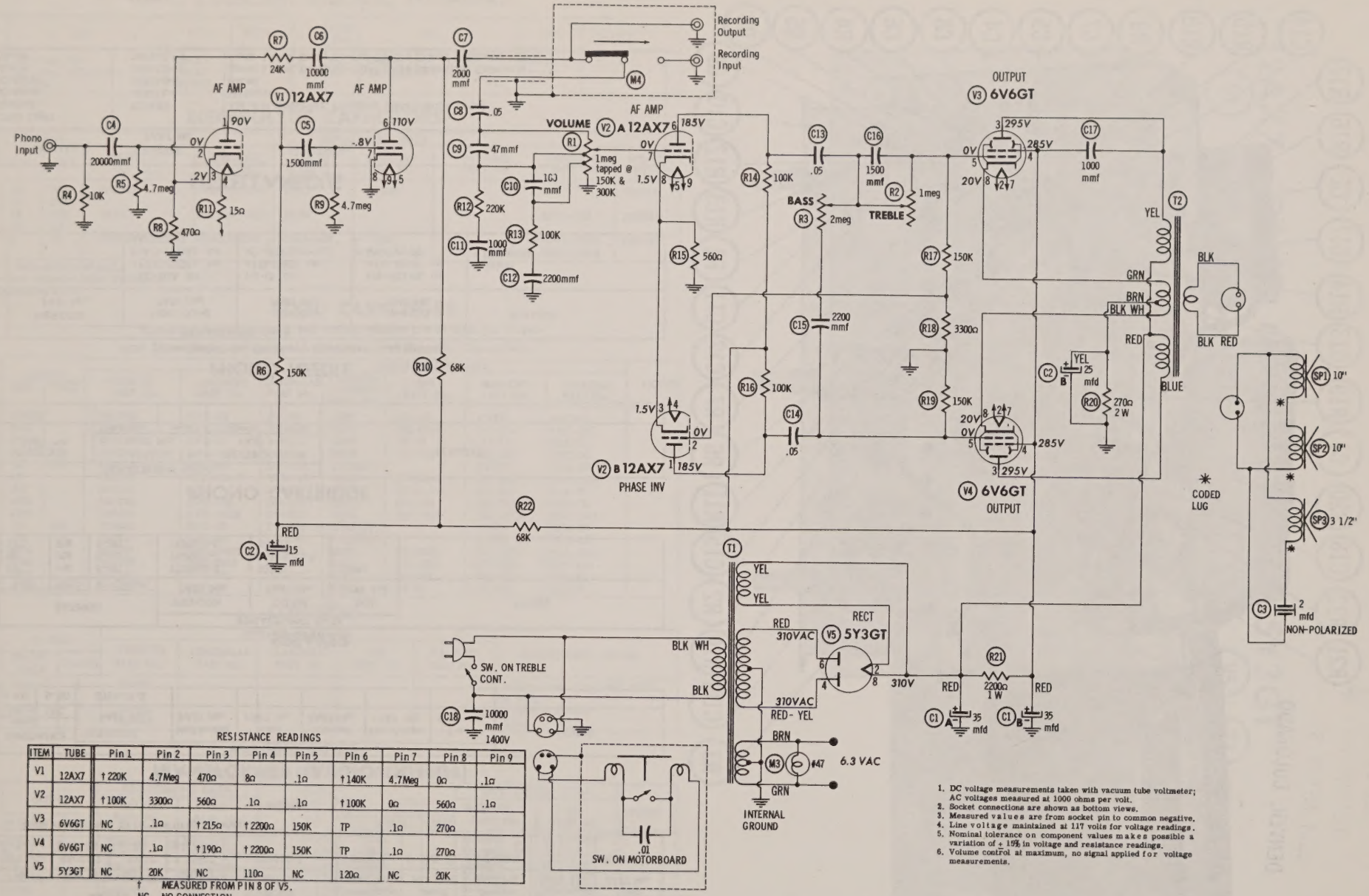

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AX7	†220K	4.7Meg	470Ω	8Ω	.1Ω	†140K	4.7Meg	0Ω	.1Ω
V2	12AX7	†100K	3300Ω	560Ω	.1Ω	.1Ω	†100K	0Ω	560Ω	.1Ω
V3	6V6GT	NC	.1Ω	†215Ω	†2200Ω	150K	TP	.1Ω	270Ω	
V4	6V6GT	NC	.1Ω	†190Ω	†2200Ω	150K	TP	.1Ω	270Ω	
V5	5Y3GT	NC	20K	NC	110Ω	NC	120Ω	NC	20K	

† MEASURED FROM PIN 8 OF V5.
NC NO CONNECTION
TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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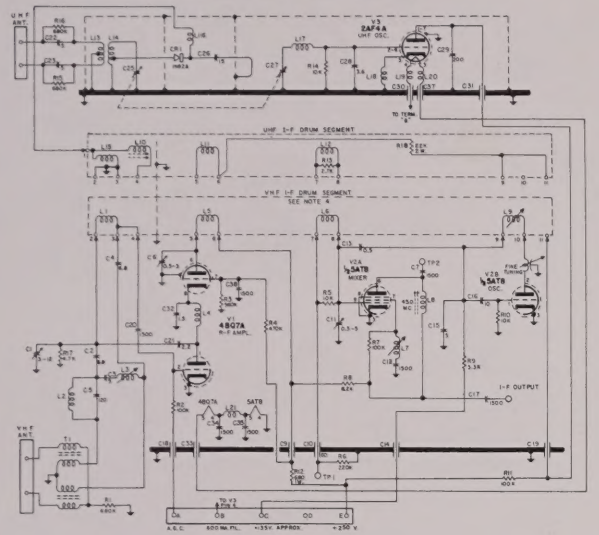
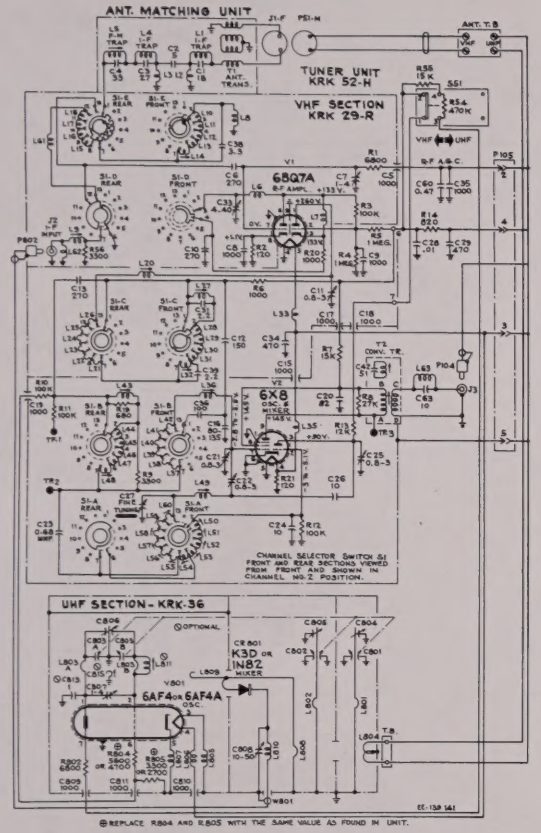
UHF VHF TURRET TYPE TUNER
PART NO. 171804-1
(STANDARD COIL TUNER TEAS-034)

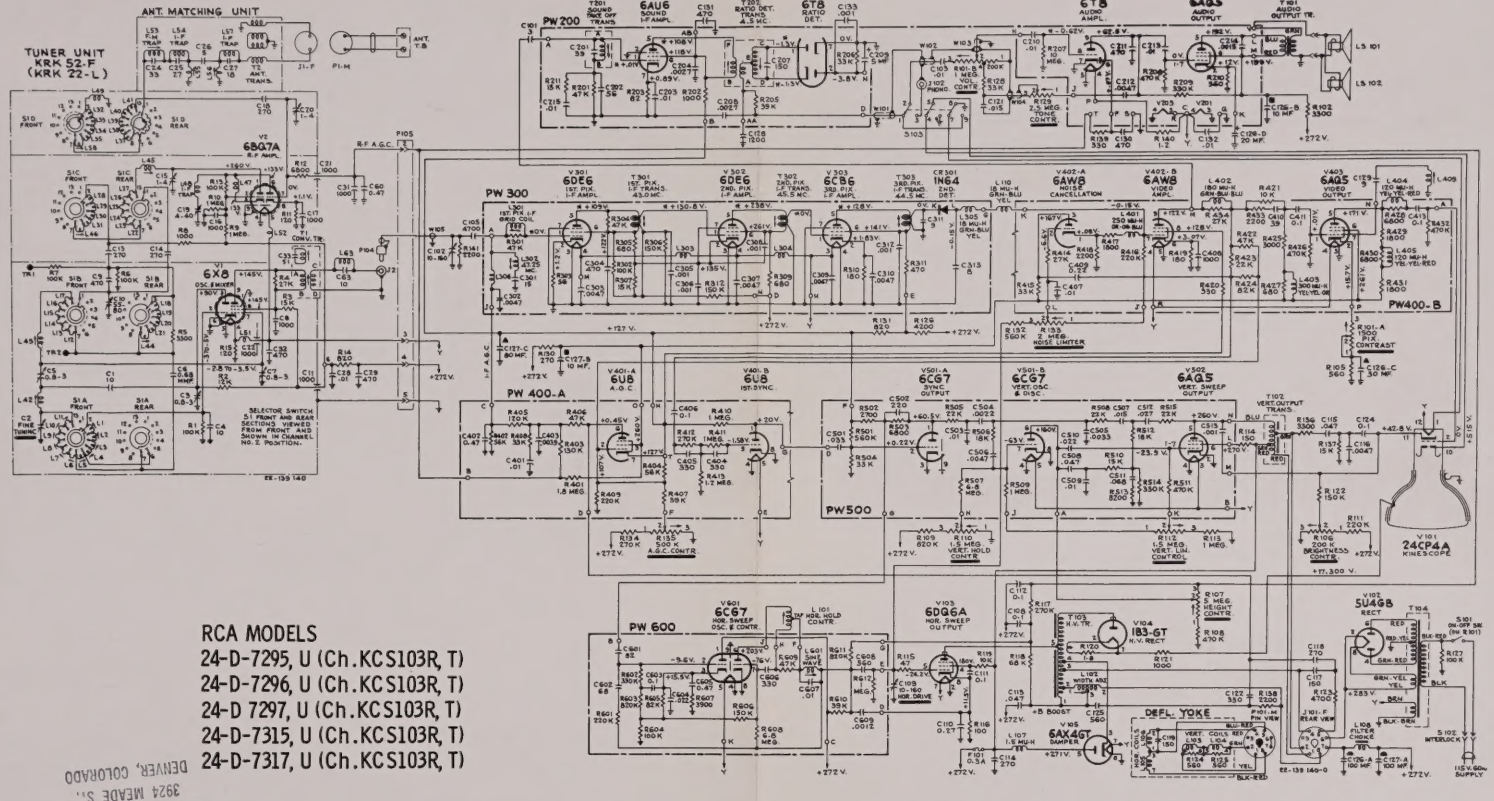


CROSLEY MODELS
AC-11B (Ch.488)
AC-11M (Ch.488)
AH-11B (Ch.488)
AT-11B (Ch.488)
AT-11M (Ch.488)

SCHEMATIC COURTESY CROSLEY Division AVCO Manufacturing Corp.



TUNER KRK52H USED IN CHASSIS KCS103T



RCA MODELS
24-D-7295, U (Ch.KCS103R, T)
24-D-7296, U (Ch.KCS103R, T)
24-D 7297, U (Ch.KCS103R, T)
24-D-7315, U (Ch.KCS103R, T)
24-D-7317, U (Ch.KCS103R, T)

PROPERTY OF
L. F. BLANKENSHIP
3924 MEADE St.
DENVER, COLORADO

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